
UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

SCHEDULE 14A INFORMATION
Proxy Statement Pursuant to Section 14(a) of the
Securities Exchange Act of 1934
(Amendment No.)

Filed by the Registrant ☒

Filed by a Party other than the Registrant ☐

Check the appropriate box:

- ☐ Preliminary Proxy Statement
- ☐ Confidential, for Use of the Commission Only (as permitted by Rule 14a-6(e)(2))
- ☒ Definitive Proxy Statement
- ☐ Definitive Additional Materials
- ☐ Soliciting Material Pursuant to §240.14a-12

BICARA THERAPEUTICS INC.
(Name of Registrant as Specified in its Charter)

(Name of Person(s) Filing Proxy Statement, if other than the Registrant)

Payment of Filing Fee (Check all boxes that apply):

- ☒ No fee required.
- ☐ Fee paid previously with preliminary materials.
- ☐ Fee computed on table in exhibit required by Item 25(b) per Securities Exchange Act of 1934 Rules 14a-6(i)(1) and 0-11.



BICARA THERAPEUTICS INC.
116 Huntington Avenue, Suite 703
Boston, MA 02116

NOTICE OF 2026 ANNUAL MEETING OF STOCKHOLDERS
To be held June 9, 2026

Notice is hereby given that the 2026 Annual Meeting of Stockholders of Bicara Therapeutics Inc., or the Annual Meeting, will be held online on June 9, 2026 at 9:00 a.m. Eastern Time. The Annual Meeting will be held virtually, and you may attend the meeting via the Internet at www.virtualshareholdermeeting.com/BCAX2026, where you will be able to vote electronically and submit questions. You will need the 16-digit control number included with the Notice of Internet Availability of Proxy Materials being mailed to you separately in order to attend the Annual Meeting.

Stockholders of record at the close of business on April 15, 2026, the record date for the Annual Meeting, are entitled to notice of, and to vote at, the Annual Meeting or any adjournment or postponement of the Annual Meeting. The purpose of the Annual Meeting is the following:

1. To elect two class II directors to our board of directors, to serve until the 2029 annual meeting of stockholders and until his or her successor has been duly elected and qualified, or until his or her earlier death, resignation or removal;
2. To ratify the appointment of KPMG LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2026; and
3. To transact any other business properly brought before the Annual Meeting or any adjournment or postponement of the Annual Meeting.

You can find more information on each of the matters to be voted on at the Annual Meeting, including information regarding the nominees for election to our board of directors, in the accompanying proxy statement. The board of directors recommends a vote "FOR" the election of each of the two nominees for class II directors and "FOR" the ratification of the appointment of our independent registered public accounting firm for the fiscal year ending December 31, 2026.

This year, the Company is following the Securities and Exchange Commission's "Notice and Access" rule that allows companies to furnish their proxy materials by posting them on the Internet. As a result, we are mailing to our stockholders a Notice of Internet Availability of Proxy Materials, or the Notice, instead of a paper copy of the accompanying proxy statement and our Annual Report for the fiscal year ended December 31, 2025, or the 2025 Annual Report. We are mailing the Notice on or about April 27, 2026, and it contains instructions on how to access both the 2025 Annual Report and accompanying proxy statement, or the Proxy Materials, over the Internet. This method provides our stockholders with expedited access to Proxy Materials and not only lowers the cost of printing and distribution but also reduces the environmental impact of the Annual Meeting. If you would like to receive a print version of the Proxy Materials, free of charge, please follow the instructions on the Notice.

To attend the Annual Meeting virtually via the Internet, please visit www.virtualshareholdermeeting.com/BCAX2026. You will not be able to attend the Annual Meeting in person.

Whether or not you expect to attend the Annual Meeting online, we encourage you to read the accompanying proxy statement and vote your shares as promptly as possible to ensure your representation and the presence of a quorum at the Annual Meeting on the Internet as described in the instructions included in the Notice by voting online at www.proxyvote.com. If you requested and received a paper copy of the Proxy Materials, you can vote by signing, dating and returning the enclosed proxy card, calling 1-800-690-6903 and following the recorded instructions, or online at www.proxyvote.com. If you vote your shares on the Internet or by telephone, you will need to enter the 16-digit control number provided in the Notice.

Your vote is important regardless of the number of shares you own. If you attend the Annual Meeting online, you may vote your shares during the Annual Meeting virtually via the Internet even if you previously voted your proxy. Your proxy is revocable in accordance with the procedures set forth in the proxy statement.

If your shares are held in “street name,” that is, held for your account by a broker or other nominee, you will receive instructions from the holder of record that you must follow for your shares to be voted.

By order of the board of directors,

/s/ Claire Mazumdar
Claire Mazumdar, Ph.D.
Chief Executive Officer and Director

Boston, Massachusetts
April 27, 2026

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**BICARA THERAPEUTICS INC.
116 Huntington Avenue, Suite 703
Boston, MA 02116**

**PROXY STATEMENT FOR THE 2026 ANNUAL MEETING OF STOCKHOLDERS
TO BE HELD JUNE 9, 2026**

This proxy statement contains information about the 2026 Annual Meeting of Stockholders, or the Annual Meeting, of Bicara Therapeutics Inc., which will be held on June 9, 2026 at 9:00 a.m. Eastern Time. The board of directors of Bicara Therapeutics Inc. is using this proxy statement to solicit proxies for use at the Annual Meeting. In this proxy statement, the terms “Bicara Therapeutics,” “Bicara,” “we,” “us,” and “our” refer to Bicara Therapeutics Inc. The mailing address of our principal executive office is Bicara Therapeutics Inc., 116 Huntington Avenue, Suite 703, Boston, MA 02116.

All properly submitted proxies will be voted in accordance with the instructions contained in those proxies. If no instructions are specified, the proxies will be voted in accordance with the recommendation of our board of directors with respect to each of the matters set forth in the accompanying Notice of Meeting. You may revoke your proxy at any time before it is exercised at the meeting by giving our corporate secretary written notice to that effect.

We will make our proxy statement and our Annual Report to Stockholders for the fiscal year ended December 31, 2025, or the 2025 Annual Report, available to stockholders on or about April 27, 2026.

We are an “emerging growth company” under applicable federal securities laws and therefore permitted to conform with certain reduced public company reporting requirements. As an emerging growth company, we provide in this proxy statement the scaled disclosure permitted under the Jumpstart Our Business Startups Act of 2012, or the JOBS Act, including the compensation disclosures required of a “smaller reporting company,” as that term is defined in Rule 12b-2 promulgated under the Securities Exchange Act of 1934, as amended, or the Exchange Act. In addition, as an emerging growth company, we are not required to conduct votes seeking approval, on an advisory basis, of the compensation of our named executive officers or the frequency with which such votes must be conducted, and we are not required to provide pay versus performance disclosure under Item 402(v) of Regulation S-K. We will remain an “emerging growth company” until the earliest of (i) the last day of the fiscal year following the fifth anniversary of our initial public offering in September 2024; (ii) the last day of the fiscal year in which our total annual gross revenue is equal to or more than \$1.235 billion; (iii) the date on which we have issued more than \$1 billion in nonconvertible debt during the previous three years; or (iv) the date on which we are deemed to be a large accelerated filer under the rules of the Securities and Exchange Commission, or the SEC. Even after we are no longer an “emerging growth company,” we may remain a “smaller reporting company.”

**Important Notice Regarding the Availability of Proxy Materials for
the Annual Meeting of Stockholders to be Held on June 9, 2026:**

**This proxy statement and our 2025 Annual Report to Stockholders are
available for viewing, printing and downloading at <https://materials.proxyvote.com/055477>**

A copy of our 2025 Annual Report, as filed with the SEC, except for exhibits, will be furnished without charge to any stockholder upon written request to Bicara Therapeutics Inc., 116 Huntington Avenue, Suite 703, Boston, MA 02116, Attention: Corporate Secretary. This proxy statement and our 2025 Annual Report are also available on the SEC’s website at www.sec.gov.

**BICARA THERAPEUTICS INC.
PROXY STATEMENT
FOR THE 2026 ANNUAL MEETING OF STOCKHOLDERS**

GENERAL INFORMATION ABOUT THE ANNUAL MEETING AND VOTING

When are this proxy statement and the accompanying materials scheduled to be sent to stockholders?

We have elected to provide access to our Proxy Materials to our stockholders via the Internet. Accordingly, on or about April 27, 2026, we will begin mailing a Notice of Internet Availability of Proxy Materials, or Notice. Our Proxy Materials, including the Notice of the 2026 Annual Meeting of Stockholders, this proxy statement and the accompanying proxy card or, for shares held in street name (i.e., held for your account by a broker or other nominee), a voting instruction form, and the 2025 Annual Report to Stockholders, or 2025 Annual Report, will be mailed or made available to stockholders on the Internet on or about the same date.

Why did I receive a Notice of Internet Availability of Proxy Materials instead of a full set of proxy materials?

Pursuant to rules adopted by the SEC, for most stockholders, we are providing access to our Proxy Materials over the Internet rather than printing and mailing our Proxy Materials. We believe following this process will expedite the receipt of such materials and will help lower our costs and reduce the environmental impact of our annual meeting materials. Therefore, the Notice will be mailed to holders of record and beneficial owners of our common stock, par value \$0.0001 per share, or our common stock, starting on or about April 27, 2026. The Notice provides instructions as to how stockholders may access and review our Proxy Materials, including the Notice of the 2026 Annual Meeting of Stockholders, this proxy statement, the proxy card and our 2025 Annual Report, on the website referred to in the Notice or, alternatively, how to request that a copy of the Proxy Materials, including a proxy card, be sent to them by mail. The Notice also provides voting instructions. In addition, stockholders of record may request to receive the proxy materials in printed form by mail or electronically by e-mail on an ongoing basis for future stockholder meetings. Please note that, while our Proxy Materials are available at the website referenced in the Notice, and our Notice of the 2026 Annual Meeting of Stockholders, this proxy statement and our 2025 Annual Report are available on our website, no other information contained on either website is incorporated by reference in or considered to be a part of this proxy statement.

Who is soliciting my vote?

Our board of directors is soliciting your vote for the Annual Meeting, including at any adjournments or postponements of the meeting.

When is the record date for the Annual Meeting?

The record date for determination of stockholders entitled to vote at the Annual Meeting is the close of business on April 15, 2026.

How many votes can be cast by all stockholders?

There were 65,600,370 shares of our common stock outstanding on April 15, 2026, all of which are entitled to vote with respect to all matters to be acted upon at the Annual Meeting on June 9, 2026. Each stockholder of record is entitled to one vote for each share of our common stock held by such stockholder. None of our shares of undesignated preferred stock were outstanding as of April 15, 2026.

Who is entitled to vote?

Registered Stockholders. If shares of our common stock are registered directly in your name with our transfer agent, you are considered the stockholder of record with respect to those shares. As the stockholder of record, you have the right to grant your voting proxy directly to the individuals listed on the proxy card or vote on your own

behalf at our virtual Annual Meeting. Throughout this proxy statement, we refer to these registered stockholders as “stockholders of record.”

Street Name Stockholders. If shares of our common stock are held on your behalf in a brokerage account or by a bank or other nominee, you are considered to be the beneficial owner of shares that are held in “street name,” and the Proxy Materials were forwarded to you by your broker or nominee, who is considered the stockholder of record with respect to those shares. As the beneficial owner, you have the right to direct your broker, bank or other nominee as to how to vote your shares. Beneficial owners are also invited to attend our virtual Annual Meeting. However, since a beneficial owner is not the stockholder of record, you may not vote your shares of our common stock on your own behalf at the Annual Meeting unless you follow your broker’s procedures for obtaining a legal proxy. Note you should also be receiving a voting instruction form for you to use from your broker. Throughout this proxy statement, we refer to stockholders who hold their shares through a broker, bank or other nominee as “street name stockholders.”

How do I vote?

If you are a stockholder of record, there are several ways for you to vote your shares.

- *Online.* You may vote at www.proxyvote.com, 24 hours a day, seven days a week. You will need the 16-digit control number included on your Notice. Votes submitted online must be received by 11:59 p.m. Eastern Time, on June 8, 2026.
- *By Telephone.* You may vote using a touch-tone telephone by calling 1-800-690-6903, 24 hours a day, seven days a week. You will need the 16-digit control number included on your Notice. Votes submitted by telephone must be received by 11:59 p.m. Eastern Time, on June 8, 2026.
- *By Mail.* If you requested and received a paper copy of the Proxy Materials you may vote by mail by completing, signing and dating the enclosed proxy card and returning it in the enclosed prepaid envelope. Votes submitted through the mail must be received by June 8, 2026.
- *By QR Code.* You may vote by scanning the QR code on your proxy card with your mobile device. Votes submitted by QR code must be received by 11:59 p.m. Eastern Time on June 8, 2026.
- *During the Annual Meeting.* You may vote during the Annual Meeting by going to www.virtualshareholdermeeting.com/BCAX2026. You will need the 16-digit control number included on your proxy card.

If the Annual Meeting is adjourned or postponed, the deadlines above may be extended.

The voting deadlines and availability of telephone and Internet voting for beneficial owners of shares held in “street name” will depend on the voting processes of the organization that holds your shares. Therefore, we urge you to carefully review and follow the voting instruction card and any other materials that you receive from that organization. **If you hold your shares of common stock in multiple accounts, you should vote your shares as described in each set of proxy materials you receive.**

How do I vote by proxy?

If you will not be attending the Annual Meeting, you may vote by proxy. You can vote by proxy over the Internet by following the instructions provided in the enclosed proxy card. Proxies submitted by mail must be received before the start of the Annual Meeting.

If you submit a proxy without giving voting instructions, your shares will be voted in the manner recommended by the board of directors on all matters presented in this proxy statement, and as the persons named as proxies in the proxy card may determine in their discretion with respect to any other matters properly presented at the Annual Meeting. You may also authorize another person or persons to act for you as proxy in a writing, signed by you or your authorized representative, specifying the details of those proxies’ authority. The original writing must be given to each of the named proxies, although it may be sent to them by electronic transmission if, from that transmission, it can be determined that the transmission was authorized by you.

If any other matters are properly presented for consideration at the Annual Meeting, including, among other things, consideration of a motion to adjourn the Annual Meeting to another time or place (including, without limitation, for the purpose of soliciting additional proxies), the persons named in your proxy and acting thereunder will have discretion to vote on those matters in accordance with their best judgment. We do not currently anticipate that any other matters will be raised at the Annual Meeting.

How can I virtually attend the Annual Meeting?

To attend and participate in the Annual Meeting, stockholders will need to access the live webcast of the meeting. To do so, stockholders of record will need to visit www.virtualshareholdermeeting.com/BCAX2026, and beneficial owners of shares held in street name will need to follow the instructions provided in the voting instructions form by the broker, bank or other nominee that holds their shares.

The live webcast of the Annual Meeting will begin promptly at 9:00 a.m. Eastern Time on June 9, 2026. We encourage stockholders to login to this website and access the webcast before the Annual Meeting's start time by following the instructions in the email received prior to the morning of the Annual Meeting. You should allow ample time in advance of the meeting.

Additionally, questions regarding how to attend and participate via the Internet can be answered by following the assistance instructions included on the virtual meeting website (www.virtualshareholdermeeting.com/BCAX2026) or by calling the phone number provided on the virtual meeting website on the day of the Annual Meeting.

If you wish to submit a question during the Annual Meeting, you may log into, and submit a question on, the virtual meeting platform using the unique link provided to you on your proxy card and following the instructions there. Our Annual Meeting will be governed by the Annual Meeting's Rules of Conduct, which will address the ability of stockholders to ask questions during the meeting and rules for how questions will be recognized and addressed. The Annual Meeting's Rules of Conduct will be available during the meeting on the virtual meeting website (www.virtualshareholdermeeting.com/BCAX2026).

How do I revoke my proxy?

You may revoke your proxy by (1) following the instructions on the Notice and entering a new vote by mail that we receive before the start of the Annual Meeting or over the Internet by the cutoff time of 11:59 p.m. Eastern Time on June 8, 2026, (2) attending and voting at the Annual Meeting (although attendance at the Annual Meeting will not in and of itself revoke a proxy), or (3) by filing an instrument in writing revoking the proxy or another duly executed proxy bearing a later date with our corporate secretary. Any written notice of revocation or subsequent proxy card must be received by our corporate secretary prior to the taking of the vote at the Annual Meeting. Such written notice of revocation or subsequent proxy card should be hand delivered to our corporate secretary or sent to our principal executive offices at Bicara Therapeutics Inc., 116 Huntington Avenue, Suite 703, Boston, MA 02116, Attention: Corporate Secretary.

If a broker, bank, or other nominee holds your shares, you must contact such broker, bank, or nominee in order to find out how to change your vote.

How is a quorum reached?

Our Third Amended and Restated Bylaws, or bylaws, provide that the presence, in person, by remote communication, if applicable, or by proxy duly authorized, of the holders of a majority of the outstanding shares of stock entitled to vote, will constitute a quorum for the transaction of business at the Annual Meeting. Under the General Corporation Law of the State of Delaware, shares that are voted "abstain" or "withheld" and broker "non-votes" are counted as present for purposes of determining whether a quorum is present at the Annual Meeting. If a quorum is not present, the meeting may be adjourned until a quorum is obtained. There were 65,600,370 shares of common stock outstanding and entitled to vote on April 15, 2026, our record date. Therefore, a quorum will be

present if 32,800,186 shares of our common stock are present in person or represented by executed proxies timely received by us at the Annual Meeting. Shares present virtually during the Annual Meeting will be considered shares of common stock represented in person at the meeting.

How is the vote counted?

Under our bylaws, to be elected, each of the directors nominated in Proposal No. 1 must receive a plurality of the shares present in person, by remote communication, if applicable, or represented by proxy duly authorized at the meeting and entitled to vote generally on the election of directors, meaning that the director nominees receiving the highest number of affirmative votes will be elected as directors. You may vote for each of the director nominees or withhold authority to vote your shares with respect to any one or more of the director nominees. Withholding authority to vote your shares with respect to one or more director nominees will have no effect on the election of directors. Broker non-votes are not considered votes cast and will have no effect on the election of directors. A broker “non-vote” occurs when a nominee holding shares for a beneficial owner does not vote on a particular proposal because the nominee does not have discretionary voting power with respect to that item and has not received instructions from the beneficial owner.

Under our bylaws, any proposal other than an election of directors is decided by the affirmative vote of a majority of the votes properly cast for and against such proposal, except where a larger vote is required by law or by our Fifth Amended and Restated Certificate of Incorporation, or certificate of incorporation, or our bylaws. As such, the appointment of our independent registered public accounting firm (Proposal No. 2) must receive the affirmative vote of a majority of the votes properly cast for and against the proposal. Abstentions and Broker “non-votes” will be treated as shares present for the purpose of determining the presence of a quorum for the transaction of business at the Annual Meeting but will not be counted as votes cast and will have no effect on the outcome of the vote for such proposal.

If your shares are held in “street name” by a brokerage firm, your brokerage firm is required to vote your shares according to your instructions. If you do not give instructions to your brokerage firm, the brokerage firm will still be able to vote your shares with respect to certain “discretionary” items but will not be allowed to vote your shares with respect to “non-discretionary” items.

The election of directors (Proposal No. 1) is a “non-discretionary” item. If you do not instruct your broker how to vote your shares with respect to this proposal, your broker may not vote for this proposal, and those shares will be counted as broker “non-votes.” The appointment of our independent registered public accounting firm (Proposal No. 2) is considered to be a discretionary item, and your brokerage firm will be able to vote your shares on this proposal even if it does not receive instructions from you. Accordingly, we do not anticipate that there will be any broker non-votes on this proposal; however, any broker non-votes will not be counted as “votes cast” and will therefore have no effect on this proposal.

Who pays the cost for soliciting proxies?

We are making this solicitation and will pay the entire cost of preparing and distributing the Notice and our Proxy Materials and soliciting votes. If you choose to access the Proxy Materials or vote over the Internet, you are responsible for any Internet access charges that you may incur. Our officers and employees may, without compensation other than their regular compensation, solicit proxies through further mailings, personal conversations, facsimile transmissions, e-mails, or otherwise. We have hired Broadridge Financial Solutions, Inc. to assist us in the distribution of proxy materials. Proxy solicitation expenses that we will pay include those for preparation, mailing, returning, and tabulating the proxies.

How may stockholders submit matters for consideration at next year’s annual meeting?

The required notice must be in writing and received by our corporate secretary at our principal executive offices not later than the close of business on March 11, 2027, nor earlier than the close of business on February 9, 2027 (not less than 90 days nor more than 120 days prior to the first anniversary of the Annual Meeting). However, in the event that the date of next year’s annual meeting is advanced by more than 30 days, or delayed by more than

60 days, from the first anniversary of the Annual Meeting, or if no annual meeting was held in the preceding year, a stockholder's notice must be so received no earlier than the 120th day prior to such annual meeting and not later than the close of business on the later of (A) the 90th day prior to such annual meeting and (B) the tenth day following the day on which notice of the date of such annual meeting was mailed or public disclosure of the date of such annual meeting was made, whichever first occurs. In addition, stockholders who intend to solicit proxies in support of director nominees other than our nominees must comply with the additional requirements of Rule 14a-19(b) under the Exchange Act.

In addition, any stockholder proposal intended to be included in the proxy statement for the next annual meeting of our stockholders in 2027 must also satisfy the requirements of SEC Rule 14a-8 under the Exchange Act, and be received not later than December 28, 2026. If the date of the annual meeting is moved by more than 30 days from the date contemplated at the time of the previous year's proxy statement, then notice must be received within a reasonable time before we begin to print and send proxy materials. If that happens, we will publicly announce the deadline for submitting a proposal in a press release or in a document filed with the SEC.

How can I get help if I have trouble checking in or listening to the meeting online?

If you encounter any difficulties accessing the virtual meeting during the check-in or meeting time, please refer to the instructions on the virtual meeting website and the phone number made available the day of the meeting on the virtual meeting website.

How can I know the voting results?

We plan to announce preliminary voting results at the Annual Meeting. Final voting results will be published in a Current Report on Form 8-K, or Form 8-K, that we expect to file with the SEC within four business days after the Annual Meeting. If final voting results are not available to us in time to file a Form 8-K within four business days after the Annual Meeting, we intend to file a Form 8-K to publish preliminary results and, within four business days after the final results are known to us, file an additional Form 8-K to publish the final results.

PROPOSAL NO. 1 – ELECTION OF CLASS II DIRECTORS

Our board of directors currently consists of ten members. In accordance with the terms of our certificate of incorporation and bylaws, our board of directors is divided into three classes, class I, class II and class III, with members of each class serving staggered three-year terms. The members of the classes are divided as follows:

- the class I directors are Ryan Cohlhepp, Pharm.D., Kiran Mazumdar-Shaw, and Jake Simson, Ph.D., and their terms will expire at the annual meeting of stockholders to be held in 2028;
- the class II directors are Christopher Bowden, M.D., Nils Lonberg, Ph.D., and Carolyn Ng, Ph.D., and their terms will expire at the Annual Meeting; and
- the class III directors are Kate Haviland, Claire Mazumdar, Ph.D., Michael Powell, Ph.D., and Scott Robertson, and their terms will expire at the annual meeting of stockholders to be held in 2027.

Upon the expiration of the term of a class of directors, directors in that class will be eligible to be elected for a new three-year term at the annual meeting of stockholders in the year in which their term expires.

Our certificate of incorporation and bylaws provide that the authorized number of directors may be changed only by resolution of our board of directors. Our certificate of incorporation also provides that our directors may be removed only for cause by the affirmative vote of the holders of at least two-thirds (2/3) of the outstanding shares then entitled to vote in an annual election of directors, and that any vacancy on our board of directors, including a vacancy resulting from an enlargement of our board of directors, may be filled only by vote of a majority of our directors then in office.

Our board of directors has nominated Christopher Bowden, M.D. and Carolyn Ng, Ph.D. for election as the class II directors at the Annual Meeting. Each of the nominees are currently directors, and each has indicated a willingness to continue to serve as a director, if elected. If any nominee becomes unable or unwilling to serve, however, the proxies may be voted for a substitute nominee selected by our board of directors.

Our board of directors has determined that Nils Lonberg, Ph.D. will not be nominated to stand for re-election when his current term expires at the Annual Meeting and, effective as of such resignation, Michael Powell, Ph.D., will be succeeding Dr. Lonberg as a member on and chairperson of the nominating and corporate governance committee. As a result, Dr. Lonberg's service as a director will end on the date of the Annual Meeting. The decision not to nominate Dr. Lonberg for re-election is not the result of any dispute or disagreement with us. Immediately prior to the opening of the polls at the Annual Meeting, our board of directors has elected to reduce the size of our board of directors from ten to nine directors.

In addition to the information presented below regarding each of the nominees and continuing directors' specific experience, qualifications, attributes and skills that our board of directors and our nominating and corporate governance committee considered in determining that he or she should serve as a director, we also believe that each of our directors has demonstrated business acumen, integrity and an ability to exercise sound judgment, as well as a commitment of service to Bicara Therapeutics and our board of directors.

Nominees for Election as Class II Directors

The following table identifies our director nominees and sets forth their positions and offices with Bicara and their ages as of April 15, 2026. The biographical description of each director nominee includes the specific experience, qualifications, attributes and skills that led to our board of directors' conclusion at the time of filing this proxy statement that each person listed below should continue to serve as a director.

Name	Positions and Offices Held with Bicara	Director Since	Age
Christopher Bowden, M.D.	Director	2024	65
Carolyn Ng, Ph.D.	Director	2023	42

Christopher Bowden, M.D. has served as a member of our board of directors since August 2024. From March 2023 until his retirement in November 2025, Dr. Bowden served as the Chief Medical Officer of Remix Therapeutics, Inc., a biotechnology company, or Remix. Dr. Bowden previously served as Strategic Advisor from September 2021 to March 2023 and Chief Medical Officer from May 2014 to September 2021 at Agios Pharmaceuticals, Inc., a biopharmaceutical company. Dr. Bowden has also served as a Clinical Consultant for a number of biotechnology and pharmaceutical companies and venture funds, including Rivus Pharmaceuticals, Inc. from October 2021 to February 2023, Pyramid Biosciences, Inc. from December 2021 to July 2022, and Remix from March 2022 to March 2023. From October 2019 until March 2023, Dr. Bowden served as a member of the board of directors of Alaunos Therapeutics, Inc. (Nasdaq: TCRT) (formerly Ziopharm Oncology, Inc.), a pharmaceutical company. Dr. Bowden has also served on the boards of directors of various private companies. Dr. Bowden received a B.A. in chemistry from Lake Forest College and an M.D. from Hahnemann University School of Medicine followed by internal medicine training at Roger Williams Medical Center and the Providence VA Medical Center, Rhode Island. He completed his medical oncology fellowship at the National Cancer Institute Medicine Branch. Dr. Bowden is board-certified in internal medicine and medical oncology. We believe Dr. Bowden’s extensive leadership and medical experience in the life sciences industry qualifies him to serve on our board of directors.

Carolyn Ng, Ph.D. has served as a member of our board of directors since December 2023. Dr. Ng currently serves as a Business Unit Partner at TPG Life Sciences Innovations, or TPG, a global investment firm, based in San Francisco, where she has led investments into transformative companies in different therapeutic areas since October 2021. Prior to joining TPG, Dr. Ng was a Managing Director at Vertex Ventures HC, a global healthcare and life sciences venture fund, where she joined in February 2015 and was promoted through various roles to be the co-Head of the investment team from June 2017 to September 2021. Dr. Ng serves on the board of directors of numerous private life sciences companies and previously served on the board of directors of Bicycle Therapeutics plc (Nasdaq: BCYC), a biotechnology company, from June 2017 until June 2020. Dr. Ng also serves as a member of the board of directors of Biocom California, the leading association representing the California life science industry. Dr. Ng holds a Ph.D. in cancer molecular biology from the National University of Singapore, where she was the recipient of the prestigious NGS, Integrative Sciences and Technology, Ph.D. scholarship, and holds a B.S. degree in Pharmacy from the National University of Singapore. We believe Dr. Ng’s extensive experience as an investor in and a member of the board of directors of numerous life sciences companies qualifies her to serve on our board of directors.

The proxies will be voted in favor of the above nominees unless a contrary specification is made in the proxy. The nominees have consented to serve as our directors if elected. However, if any nominee is unable to serve or for good cause will not serve as a director, the proxies will be voted for the election of such substitute nominee as our board of directors may designate.

Vote Required

To be elected, each director nominee must receive a plurality of the shares present in person or represented by proxy duly authorized at the meeting and entitled to vote on the election of directors. Withheld votes and broker non-votes will have no effect on the election of directors.

Board Recommendation

The board of directors recommends voting “FOR” the election of Christopher Bowden, M.D. and Carolyn Ng, Ph.D., as the class II directors, to serve for a three-year term ending at the annual meeting of stockholders to be held in 2029.

Directors Continuing in Office or Not Standing for Re-Election

The following table identifies our continuing directors and those not standing for re-election at this year's Annual Meeting, and sets forth their positions and offices with Bicara, their class and year in which their term will expire and their ages as of April 15, 2026. The biographical description of each director includes the specific experience, qualifications, attributes and skills that qualify them to serve on our board of directors.

Name	Position and Offices Held with Bicara	Director Since	Class and Year in Which Term Will Expire	Age
Ryan Cohlhepp, Pharm.D.	President, Chief Operating Officer and Director	2024	Class I – 2028	49
Kiran Mazumdar-Shaw	Director	2018	Class I – 2028	73
Jake Simson, Ph.D.	Director	2023	Class I – 2028	40
Nils Lonberg, Ph.D.*	Director	2019	Class II – 2026	70
Kate Haviland	Director	2023	Class III – 2027	50
Claire Mazumdar, Ph.D.	Chief Executive Officer and Director	2020	Class III – 2027	36
Michael Powell, Ph.D.	Director	2024	Class III – 2027	71
Scott Robertson	Director	2023	Class III – 2027	46

*Dr. Lonberg will not be standing for re-election at this year's Annual Meeting.

Class I Directors (Term Expires at 2028 Annual Meeting)

Ryan Cohlhepp, Pharm.D. has served as our President and Chief Operating Officer since October 2020, and as a member of our board of directors since August 2024 and previously from December 2020 to March 2023. Prior to Bicara, Dr. Cohlhepp was Senior Vice President, R&D Strategy and Operations at Rheos Medicines, Inc., a biopharmaceutical company, from March 2018 to October 2020. Earlier in his career, Dr. Cohlhepp served in roles of increasing responsibility at Takeda Oncology and Roche. Dr. Cohlhepp received a Pharm.D. from Purdue University. We believe Dr. Cohlhepp's senior management experience in the biopharmaceutical industry make him well qualified to serve on our board of directors.

Kiran Mazumdar-Shaw has served as a member of our board of directors since December 2018. Ms. Mazumdar-Shaw founded Biocon Limited, a global biopharmaceuticals company, in 1978 and has served as the Executive Chairperson since November 1978. Additionally, Ms. Mazumdar-Shaw has served as the Executive Chairperson of Biocon Biologics Limited, a global biosimilars company, since January 2021 and as the Non-Executive Chairperson of Syngene International Limited, a contract research, development and manufacturing organization, since April 2020. Ms. Mazumdar-Shaw also serves on the boards of directors of various private companies and educational institutions and holds key positions in certain governmental bodies. Ms. Mazumdar-Shaw holds a B.Sc. Honours degree in Zoology from Central College, Bangalore University and Post-Graduate in Malting and Brewing from Ballarat College, Melbourne University. She also has many honorary degrees from several renowned international universities. Ms. Mazumdar-Shaw is the aunt of our Chief Executive Officer, Claire Mazumdar, Ph.D. We believe Ms. Mazumdar-Shaw's experience as a pioneering biotech entrepreneur and healthcare visionary qualifies her to serve on our board of directors.

Jake Simson, Ph.D. has served as a member of our board of directors since March 2023. Since December 2020, Dr. Simson has served as a Partner of RA Capital Management, L.P., a life sciences investment advisor. Dr. Simson previously served as an associate, analyst and principal at RA Capital Management, L.P. from July 2013 to December 2020. Dr. Simson has served as a member of the board of directors of biotechnology and biopharmaceutical companies Tyra Biosciences, Inc. (Nasdaq: TYRA), Septerna, Inc. (Nasdaq: SEPT), and Janux Therapeutics, Inc. (Nasdaq: JANX) since January 2020, June 2023 and March 2021, respectively. Dr. Simson previously served on the board of directors of DICE Therapeutics, Inc. (Nasdaq: DICE), a biotechnology company, from December 2020 until it was acquired by Eli Lilly and Company in August 2023. Dr. Simson also serves on the boards of directors of various private companies. Dr. Simson received his Ph.D. in Biomedical Engineering from

Johns Hopkins University and his B.S. in Materials Science and Engineering from Massachusetts Institute of Technology. We believe Dr. Simson is qualified to serve on our board of directors due to his experience serving as a director for several private and public life science companies and his experience in the life sciences investment industry.

Class II Directors (Term Expires at This Year's Annual Meeting)

Nils Lonberg, Ph.D. has served as a member of our board of directors since April 2019 and was previously the Chairperson of our board of directors until August 2024. Since June 2025, Dr. Lonberg has served as Chief Executive Officer of Tripeaks Therapeutics, Inc., a biotechnology company. Dr. Lonberg also currently serves as an Executive in Residence at Canaan Partners, a venture capital firm, where he has been employed since May 2019 and where he focuses on investments in life science companies. Prior to Canaan Partners, Dr. Lonberg served as Vice President, Oncology Discovery Biology, at Bristol-Myers Squibb Co., a biopharmaceutical company, where he led drug discovery efforts for both targeted and immuno-oncology agents, from September 2009 to April 2019. Dr. Lonberg also serves on the boards of directors of various private companies. Dr. Lonberg received his Ph.D. in Biochemistry and Molecular Biology from Harvard University and a B.S. in chemistry from Reed College. He was a postdoctoral fellow at Memorial Sloan Kettering Cancer Center and was elected to the National Academy of Engineering in 2015. We believe Dr. Lonberg's extensive executive, managerial and business experience with life sciences companies qualifies him to serve on our board of directors.

Class III Directors (Term Expires at 2027 Annual Meeting)

Kate Haviland has served as a member of our board of directors since September 2023. Ms. Haviland previously served as the President and Chief Executive Officer and a member of the board of directors of Blueprint Medicines Corporation, or Blueprint, a publicly traded biopharmaceutical company, from April 2022 until its acquisition by Sanofi in July 2025. Ms. Haviland was the Chief Operating Officer at Blueprint from January 2019 to April 2022 and the Chief Business Officer from January 2016 to January 2019. Prior to joining Blueprint, Ms. Haviland served as Vice President, Rare Diseases and Oncology Program Leadership at Idera Pharmaceuticals, Inc. (acquired by Aceragen, Inc.), a biopharmaceutical company, from April 2014 to December 2015, and as head of commercial development at Sarepta Therapeutics, Inc. (Nasdaq: SRPT), a biopharmaceutical and drug development company, from June 2012 to April 2014. Ms. Haviland currently serves on the board of directors of Fulcrum Therapeutics, Inc. (Nasdaq: FULC), a biopharmaceutical company, as well as a number of private companies. Ms. Haviland holds a B.A. from Wesleyan University with a double major in Molecular Biology/Biochemistry and Economics and an M.B.A. from Harvard Business School. We believe Ms. Haviland is qualified to serve on our board of directors because of her experience as an executive and director of publicly traded life sciences companies.

Claire Mazumdar, Ph.D. has served as our Chief Executive Officer and as a member of our board of directors since January 2020. Prior to Bicara, Dr. Mazumdar was Head of Business Development and Corporate Strategy at Rheos Medicines, Inc., a biopharmaceutical company, from August 2017 to December 2019, which culminated in a large multi-target discovery partnership with Roche. Previously, Dr. Mazumdar was an investment professional at Third Rock Ventures, LLC, or Third Rock, a life sciences venture capital firm, from July 2017 to July 2019. Dr. Mazumdar has served on the board of directors of Relay Therapeutics, Inc. (Nasdaq: RLAY), a clinical-stage, precision medicine company, since June 2025. Dr. Mazumdar received a B.S. in Biological Engineering from Massachusetts Institute of Technology, a Ph.D. in Cancer Biology from Stanford School of Medicine, and an M.B.A. from Stanford Graduate School of Business. Dr. Mazumdar is the niece of Kiran Mazumdar-Shaw, a member of our board of directors. We believe Dr. Mazumdar's senior management experience in the biopharmaceutical industry make her well qualified to serve on our board of directors.

Michael Powell, Ph.D. has served as a member and as the Chairperson of our board of directors since August 2024. Since August 2025, Dr. Powell has served as a Venture Advisor at Lantana Ranch LLC. Dr. Powell was previously an Executive Partner/Venture Advisor at Omega Funds, a venture capital firm, from August 2021 until August 2025, and a General Partner at Sofinnova Investments, a biopharmaceutical investment firm, from August 1997 until June 2021. Dr. Powell served as a member of the board of directors of Galera Therapeutics, Inc. (Nasdaq: GRTX), a biopharmaceutical company, from November 2016 to December 2024, and the chair and a member of the board of directors of Checkmate Pharmaceuticals, Inc. (Nasdaq: CMPI), a biopharmaceutical company, from July

2015 to May 2022. Dr. Powell has also served on the boards of directors of several private companies. Dr. Powell received a B.S. in chemistry from Scarborough College, a Ph.D. in Physical Chemistry from the University of Toronto and completed post-doctoral studies in Bioorganic Chemistry at the University of California as a National Science and Engineering Research Council Scholar. We believe Dr. Powell's extensive experience in the life sciences investment industry qualifies him to serve on our board of directors.

Scott Robertson has served as a member of our board of directors since September 2023. Mr. Robertson currently serves as the Chief Financial Officer and Chief Business Officer of Star Therapeutics, Inc., a biotechnology company, since January 2024. Mr. Robertson also served as the Chief Business and Financial Officer of DICE Therapeutics, Inc. (Nasdaq: DICE), a biotechnology company, from July 2021 to December 2023 (including following the company's acquisition by Eli Lilly and Company in August 2023), the Chief Financial Officer from December 2017 to July 2021, and as the Vice President, Business Development & Strategic Planning from April 2016 to December 2017. He previously served as a Lecturer at the Haas School of Business at the University of California, Berkeley and as a member of the board of directors of Hexima Limited (ASX: HXL), a biotechnology company, from December 2018 to September 2023. Mr. Robertson received his B.S. in Business Administration from the University of Southern California and his M.B.A. from the Haas School of Business at the University of California, Berkeley. We believe Mr. Robertson's extensive executive and business experience with life sciences companies qualifies him to serve on our board of directors.

PROPOSAL NO. 2 – RATIFICATION OF THE APPOINTMENT OF KPMG LLP AS BICARA THERAPEUTICS INC.’S INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM FOR THE FISCAL YEAR ENDING DECEMBER 31, 2026

Our stockholders are being asked to ratify the appointment by the audit committee of the board of directors of KPMG LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2026. KPMG LLP has served as our independent registered public accounting firm since 2021.

The audit committee is solely responsible for selecting our independent registered public accounting firm for the fiscal year ending December 31, 2026. Stockholder approval is not required to appoint KPMG LLP as our independent registered public accounting firm. However, the board of directors believes that submitting the appointment of KPMG LLP to the stockholders for ratification is good corporate governance. If the stockholders do not ratify this appointment, the audit committee will reconsider whether to retain KPMG LLP. If the selection of KPMG LLP is ratified, the audit committee, at its discretion, may direct the appointment of a different independent registered public accounting firm at any time it decides that such a change would be in the best interest of Bicara Therapeutics and its stockholders.

A representative of KPMG LLP is expected to be present at the Annual Meeting and will have an opportunity to make a statement if he or she desires to do so and to respond to appropriate questions from our stockholders.

Principal Accountant Fees and Services

Bicara Therapeutics incurred the following fees from KPMG LLP for the audit of the consolidated financial statements and for other services related to the years ended December 31, 2025 and December 31, 2024.

Fee Category	2025	2024
Audit Fees ⁽¹⁾	\$ 910,000	\$ 1,595,000
Audit-Related Fees ⁽²⁾	—	—
Tax Fees ⁽³⁾	—	—
All Other Fees	—	—
Total Fees	\$ 910,000	\$ 1,595,000

(1) Audit Fees consist of fees billed for professional services performed by KPMG LLP for the audit of our annual consolidated financial statements, the review of interim consolidated financial statements, and related services provided in connection with offerings, registration statements, comfort letters and consents. For the year ended December 31, 2024, this category also includes fees related to our initial public offering in September 2024.

(2) Audit-related fees consist of fees for assurance and related services that are reasonably related to the performance of audits or reviews of our financial statements and were not reported above under “Audit Fees.” There were no audit-related fees in fiscal years 2025 and 2024.

(3) Tax Fees consist of fees for tax compliance, advice and tax services. There were no tax fees in fiscal years 2025 and 2024.

Audit Committee Pre-Approval Policy and Procedures

Our audit committee has adopted policies and procedures relating to the approval of all audit and non-audit services that are to be performed by our independent registered public accounting firm. This policy provides that we will not engage our independent registered public accounting firm to render audit or non-audit services unless the service is specifically approved in advance by our audit committee or the engagement is entered into pursuant to the pre-approval procedure described below.

From time to time, our audit committee may pre-approve specified types of services that are expected to be provided to us by our independent registered public accounting firm during the next 12 months. Any such pre-approval details the particular service or type of services to be provided and is also generally subject to a maximum dollar amount.

During the fiscal years ended 2025 and 2024, no services were provided to us by KPMG LLP other than in accordance with the pre-approval policies and procedures described above.

Vote Required

To ratify the appointment of KPMG LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2026, the affirmative vote of a majority of the votes properly cast for and against this Proposal No. 2 is required. Abstentions will have no effect on the outcome of this proposal. This proposal is considered to be a discretionary item, and your broker will be able to vote on this proposal even if it does not receive instructions from you. Accordingly, we do not anticipate that there will be any broker non-votes on this proposal; however, any broker non-votes will not be counted as “votes cast” and will therefore have no effect on this proposal.

Board Recommendation

The board of directors recommends voting “FOR” Proposal No. 2 to ratify the appointment of KPMG LLP as Bicara Therapeutics Inc.’s independent registered public accounting firm for the fiscal year ending December 31, 2026.

CORPORATE GOVERNANCE

Director Nomination Process

Our nominating and corporate governance committee is responsible for identifying individuals qualified to serve as directors, consistent with criteria approved by our board, and recommending such persons to be nominated for election as directors, except where we are legally required by contract, law or otherwise to provide third parties with the right to nominate.

The process followed by our nominating and corporate governance committee to identify and evaluate director candidates includes requests to board members and others for recommendations, meetings from time to time to evaluate biographical information and background material relating to potential candidates, and interviews of selected candidates by management, recruiters, members of the committee and our board. The qualifications, qualities and skills that our nominating and corporate governance committee believes must be met by a committee-recommended nominee for a position on our board of directors are as follows:

- Nominees should demonstrate high standards of personal and professional ethics and integrity.
- Nominees should have proven achievement and competence in the nominee's field and the ability to exercise sound business judgment.
- Nominees should have the education, expertise and business acumen to make significant contributions to the Company's success.
- Nominees should have skills that are complementary to those of the existing board.
- Nominees should have the ability to assist and support management and make significant contributions to the Company's success.
- Nominees should have an understanding of the fiduciary responsibilities that are required of a member of the board of directors and the commitment of time and energy necessary to diligently carry out those responsibilities.
- Nominees should have a diverse personal background, perspective and experience.
- Nominees should have a commitment to vigorously represent the long-term interests of our stockholders.

Our priority in selection of board members is identification of members who will further the interests of our stockholders through their established records of professional accomplishment, their ability to contribute positively to the collaborative culture among board members, their knowledge of our business and understanding of the competitive landscape in which we operate, their adherence to high ethical standards and the absence of conflicts of interest. The nominating and corporate governance committee and the full board of directors are committed to creating a board of directors with diverse expertise, experience and professional and demographic backgrounds, and are committed to identifying, recruiting and advancing candidates offering such diversity in future searches.

Stockholders may recommend individuals to the nominating and corporate governance committee for consideration as potential director candidates. Any such proposals should be submitted to our corporate secretary at our principal executive offices no later than the close of business on the 90th day nor earlier than the close of business on the 120th day prior to the one-year anniversary of the date of the preceding year's annual meeting and should include appropriate biographical and background material to allow the nominating and corporate governance committee to properly evaluate the potential director candidate and the number of shares of our stock beneficially owned by the stockholder proposing the candidate. Stockholder proposals should be addressed to Bicara Therapeutics Inc., 116 Huntington Avenue, Suite 703, Boston, MA 02116, Attention: Corporate Secretary. Assuming that biographical and background material has been provided on a timely basis in accordance with our bylaws, any recommendations received from stockholders will be evaluated in the same manner as potential nominees proposed by the nominating and corporate governance committee. If our board of directors determines to nominate a stockholder recommended candidate and recommends his or her election, then his or her name will be included on our proxy card for the next annual meeting of stockholders. See the section of this proxy statement titled "Stockholder Proposals" for a discussion of submitting stockholder proposals.

Director Independence

Applicable rules of the Nasdaq Stock Market LLC, or Nasdaq, require a majority of a listed company's board of directors to be comprised of independent directors within one year of listing. In addition, the Nasdaq rules require that, subject to specified exceptions, each member of a listed company's audit, compensation and nominating and corporate governance committees be independent and that audit committee members also satisfy independence criteria set forth in Rule 10A-3 under the Exchange Act and that compensation committee members satisfy independence criteria set forth in Rule 10C-1 under the Exchange Act. Under applicable Nasdaq rules, a director will only qualify as an "independent director" if, in the opinion of the listed company's board of directors, that person does not have a relationship that would interfere with the exercise of independent judgment in carrying out the responsibilities of a director. In order to be considered independent for purposes of Rule 10A-3, a member of an audit committee of a listed company may not, other than in his or her capacity as a member of the audit committee, the board of directors, or any other board committee, accept, directly or indirectly, any consulting, advisory, or other compensatory fee from the listed company or any of its subsidiaries or otherwise be an affiliated person of the listed company or any of its subsidiaries. In addition, in affirmatively determining the independence of any director who will serve on a company's compensation committee, Rule 10C-1 under the Exchange Act requires that a company's board of directors must consider all factors specifically relevant to determining whether a director has a relationship to such company which is material to that director's ability to be independent from management in connection with the duties of a compensation committee member, including: the source of compensation to the director, including any consulting, advisory or other compensatory fee paid by such company to the director, and whether the director is affiliated with the company or any of its subsidiaries or affiliates.

Our board of directors has determined that all members of the board of directors, except Claire Mazumdar, Ph.D. and Ryan Cohlhepp, Pharm.D., are independent directors, including for purposes of the rules of Nasdaq and the SEC. In making such independence determination, our board of directors considered the relationships that each non-employee director has with us and all other facts and circumstances that our board of directors deemed relevant in determining their independence, including the beneficial ownership of our capital stock by each non-employee director. In considering the independence of the directors listed above, our board of directors considered the association of our directors with the holders of more than 5% of our common stock. Dr. Mazumdar is the niece of Ms. Mazumdar-Shaw; otherwise, there are no family relationships among any of our directors or executive officers. Dr. Mazumdar is not an independent director under these rules because she is the Chief Executive Officer of the Company. Dr. Cohlhepp is not an independent director under these rules because he is the President and Chief Operating Officer of the Company.

Board Committees

Our board of directors has established an audit committee, a compensation committee and a nominating and corporate governance committee. Each of the audit committee, compensation committee and nominating and corporate governance committee operates under a charter that satisfies the applicable standards of the SEC and Nasdaq. Each such committee reviews its respective charter at least annually. A current copy of the charter for each of the audit committee, compensation committee and nominating and corporate governance committee is posted on the corporate governance section of our website <https://ir.bicara.com/corporate-governance/governance-overview>.

Audit Committee

Carolyn Ng, Ph.D., Michael Powell, Ph.D., and Scott Robertson serve on the audit committee, which is chaired by Mr. Robertson. Our board of directors has determined that each member of the audit committee is "independent" for audit committee purposes as that term is defined by the rules of the SEC and Nasdaq, and that each has sufficient knowledge in financial and auditing matters to serve on the audit committee. Our board of directors has designated Scott Robertson as an "audit committee financial expert," as defined under the applicable rules of the SEC. During the fiscal year ended December 31, 2025, the audit committee met four times. The audit committee's responsibilities include:

- appointing, approving the compensation of, and assessing the independence of our independent registered public accounting firm;

- pre-approving auditing and permissible non-audit services, and the terms of such services, to be provided by our independent registered public accounting firm;
- reviewing the overall audit plan with our independent registered public accounting firm and members of management responsible for preparing our financial statements;
- reviewing and discussing with management and our independent registered public accounting firm our annual and quarterly financial statements and related disclosures as well as critical accounting policies and practices used by us;
- coordinating the oversight and reviewing the adequacy of our internal control over financial reporting;
- establishing policies and procedures for the receipt and retention of accounting-related complaints and concerns;
- recommending, based upon the audit committee's review and discussions with management and our independent registered public accounting firm, whether our audited financial statements shall be included in our Annual Report on Form 10-K;
- monitoring the integrity of our financial statements and our compliance with legal and regulatory requirements as they relate to our financial statements and accounting matters;
- reviewing and discussing with management and our board of directors our cybersecurity risks, including information security and technology risks;
- preparing the audit committee report required by SEC rules to be included in our annual proxy statement;
- reviewing all related person transactions for potential conflict of interest situations and approving all such transactions;
- reviewing quarterly earnings releases; and
- reviewing our major risk exposures, including financial, operational, cybersecurity, competition, legal and regulatory exposures.

All audit and non-audit services, other than de minimis non-audit services, to be provided to us by our independent registered public accounting firm must be approved in advance by our audit committee.

Compensation Committee

Christopher Bowden, M.D., Kate Haviland, and Michael Powell, Ph.D. serve on the compensation committee, which is chaired by Dr. Powell. Our board of directors has determined that each member of the compensation committee is "independent" as defined in the applicable Nasdaq rules. During the fiscal year ended December 31, 2025, the compensation committee met three times. The compensation committee's responsibilities include:

- reviewing and recommending to the board of directors the corporate goals and objectives relevant to the compensation of our Chief Executive Officer and President;
- evaluating the performance of our Chief Executive Officer and President in light of such corporate goals and objectives and based on such evaluation: (i) recommending to the board of directors the cash compensation of our Chief Executive Officer and President, and (ii) recommending to the board of directors grants and awards to our Chief Executive Officer and President under equity-based plans;
- reviewing and approving the cash compensation of our other executive officers;
- reviewing and establishing our overall management compensation, philosophy and policy;
- overseeing and administering our compensation and similar plans;
- reviewing and approving the retention or termination of any consulting firm or outside advisor to assist in the evaluation of compensation matters and evaluating and assessing potential and current compensation advisors in accordance with the independence standards identified in the applicable Nasdaq rules;
- retaining and approving the compensation of any compensation advisors;
- reviewing and recommending to the board of directors our policies and procedures for the grant of equity-based awards;
- reviewing and recommending to the board of directors the compensation of our directors; and

- reviewing and approving the compensation committee report required by SEC rules, if and when required, to be included in our annual proxy statement.

The compensation committee may establish and delegate authority to one or more subcommittees consisting of one or more of its members to carry out its responsibilities. For example, to the extent permitted by applicable law and the provisions of a given equity-based plan, the compensation committee may delegate to a committee consisting one or more executive officers of the Company the power to grant stock awards, and amend the terms of such awards, pursuant to such equity-based plan to employees of the Company or any subsidiary of the Company who are not directors or executive officers of the Company, such power to be subject to the parameters and limitations set forth in the applicable resolutions adopted by the compensation committee. Additionally, to the extent permitted by applicable law and the provisions of any employee benefit plan, the compensation committee may delegate any of its duties, responsibilities or authority in connection with any employee benefit plan to members of management as the compensation committee deems appropriate. The compensation committee has delegated to our Chief Executive Officer the authority to make certain equity award grants under our stockholder-approved equity plan to employees (other than our executive officers), within specified limits approved by the compensation committee.

Nominating and Corporate Governance Committee

Nils Lonberg, Ph.D., Kiran Mazumdar-Shaw, and Jake Simson, Ph.D. currently serve on the nominating and corporate governance committee, which is chaired by Dr. Lonberg. Dr. Lonberg has not be nominated to stand for re-election to our board of directors when his term expires at the Annual Meeting. As a result, Dr. Lonberg's service as a member of the nominating and corporate governance committee will end on the date of the Annual Meeting, at which time Michael Powell, Ph.D. will assume the role as chair and a member of the nominating and corporate governance committee. Our board of directors has determined that each member of the nominating and corporate governance committee and Dr. Powell are "independent" as defined in the applicable Nasdaq rules. During the fiscal year ended December 31, 2025, the nominating and corporate governance committee met two times. The nominating and corporate governance committee's responsibilities include:

- developing and recommending to the board of directors a criteria for board and committee membership;
- establishing procedures for identifying and evaluating board of director candidates, including nominees recommended by stockholders;
- reviewing the composition of the board of directors to ensure that it is composed of members containing the appropriate skills and expertise to advise us;
- identifying individuals qualified to become members of the board of directors;
- recommending to the board of directors the persons to be nominated for election as directors and to each of the board's committees;
- reviewing and recommending to the board of directors appropriate corporate governance guidelines; and
- overseeing the evaluation of our board of directors.

The nominating and corporate governance committee considers candidates for membership of our board of directors based on suggestions from its members and the Chief Executive Officer. Additionally, in selecting nominees for directors, the nominating and corporate governance committee will review candidates recommended by stockholders in the same manner and using the same general criteria as candidates recruited by the committee and/or recommended by our board of directors. Any stockholder who wishes to recommend a candidate for consideration by the committee as a nominee for director should follow the procedures described later in this proxy statement under the heading "Stockholder Proposals." The nominating and corporate governance committee will also consider whether to nominate any person proposed by a stockholder in accordance with the provisions of our bylaws relating to stockholder nominations as described later in this proxy statement under the heading "Stockholder Proposals."

Identifying and Evaluating Director Nominees. Our board of directors is responsible for filling vacancies on our board of directors and for nominating candidates for election by our stockholders each year in the class of directors whose term expires at the relevant annual meeting. The board of directors delegates the selection and

nomination process to the nominating and corporate governance committee, with the expectation that other members of the board of directors, and of management, will be requested to take part in the process as appropriate.

Generally, the nominating and corporate governance committee identifies candidates for director nominees in consultation with management, through the use of search firms or other advisors, through the recommendations submitted by stockholders or through such other methods as the nominating and corporate governance committee deems to be helpful to identify candidates. Once candidates have been identified, the nominating and corporate governance committee confirms that the candidates meet all of the minimum qualifications for director nominees established by the nominating and corporate governance committee. The nominating and corporate governance committee may gather information about the candidates through interviews, detailed questionnaires, comprehensive background checks or any other means that the nominating and corporate governance committee deems to be appropriate in the evaluation process. The nominating and corporate governance committee then meets as a group to discuss and evaluate the qualities and skills of each candidate, both on an individual basis and taking into account the overall composition and needs of our board of directors. Based on the results of the evaluation process, the nominating and corporate governance committee recommends candidates for the board of directors' approval to fill a vacancy or as director nominees for election to the board of directors by our stockholders each year in the class of directors whose term expires at the relevant annual meeting.

Board and Committee Meetings Attendance

During the fiscal year ended December 31, 2025, the full board of directors met four times. Each member of the board of directors attended in person or participated in 75% or more of the aggregate of (i) the total number of meetings of the board of directors (held during the period for which such person has been a director), and (ii) the total number of meetings held by all committees of the board of directors on which such person served (during the periods that such person served).

Director Attendance at Annual Meeting of Stockholders

Directors are responsible for attending the annual meeting of stockholders to the extent practicable. It is our policy that all directors and nominees for director make every effort to attend the Annual Meeting.

Policy on Trading, Pledging and Hedging of Company Stock

Certain transactions in our securities (such as purchases and sales of publicly traded put and call options, and short sales) create a heightened compliance risk or could create the appearance of misalignment between management and stockholders. In addition, securities held in a margin account or pledged as collateral may be sold without consent if the owner fails to meet a margin call or defaults on the loan, thus creating the risk that a sale may occur at a time when an officer or director is aware of material, non-public information or otherwise is not permitted to trade in Company securities. Our insider trading policy expressly prohibits derivative transactions of our stock by our executive officers, directors and employees. Our insider trading policy expressly prohibits purchases of any derivative securities that provide the economic equivalent of ownership.

Rule 10b5-1 Trading Plan Policy

We have adopted a Rule 10b5-1 trading plan policy, which permits our officers, directors, employees and certain other persons to enter into trading plans complying with Rule 10b5-1 under the Exchange Act. Generally, under these trading plans, the individual relinquishes control over the transactions once the trading plan is put into place and can only put such plans into place while the individual is not in possession of material non-public information. Accordingly, sales under these plans may occur at any time, including possibly before, simultaneously with, or immediately after significant events involving our company.

Insider Trading Policy

We have adopted an insider trading policy which governs transactions in our securities by the Company and our directors, officers, employees, and certain designated consultants and is designed to promote compliance with insider trading laws, rules and regulations applicable to us. A copy of our insider trading policy is filed with our Annual Report on Form 10-K as Exhibit 19.1.

Compensation Recovery Policy

In accordance with the requirements of the SEC and Nasdaq listing rules, we maintain a compensation recovery policy, or clawback policy. The clawback policy provides that in the event we are required to prepare a restatement of financial statements due to material noncompliance with any financial reporting requirement under securities laws, we must (subject to certain limited exceptions described in the clawback policy and permitted under the SEC and Nasdaq listing rules) recover any incentive-based compensation that was based upon the attainment of a financial reporting measure and that was received by any current or former executive officer during the three-year period preceding the date that the restatement was required if such compensation exceeds the amount that the executive officer would have received based on the restated financial statements. A copy of our compensation recovery policy is filed with our Annual Report on Form 10-K as Exhibit 10.7.

Policies and Practices Related to the Grant of Certain Equity Awards

It is the policy of our board of directors and our compensation committee to not take material non-public information into account when determining the timing of equity awards in order to take advantage of a depressed stock price or an anticipated increase in stock price. Similarly, it is our practice not to time the release of material nonpublic information based on equity award grant dates or for the purpose of affecting the value of executive compensation.

We generally grant equity awards on a regularly scheduled basis in accordance with our equity award grant policy. Any annual equity awards to eligible employees, including our executive officers, will be effective upon the first trading day of the month following approval of such awards, which approval will generally occur at the regularly-scheduled meeting of our board of directors or our compensation committee (as applicable). Annual awards to members of our board of directors will be made on the date of our annual meeting of stockholders, initial awards to members of our board of directors will be made on the date of their election or appointment, as applicable, and awards to new hires or in connection with a promotion will be made on a regular basis and shall become effective on the first trading day of the month following the later of approval of the award or the employee's date of hire or promotion, as applicable.

During the year ended December 31, 2025, we did not grant any stock options, stock appreciation rights or similar option-like instruments to any of our named executive officers during any period beginning four business days before and ending one business day after the filing or furnishing of a Form 10-Q, Form 10-K or Form 8-K that discloses material non-public information.

Code of Business Conduct and Ethics

We have adopted a written code of business conduct and ethics that applies to our directors, officers and employees, including our principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions. A current copy of the code is posted on the corporate governance section of our website, which is located at <https://ir.bicara.com/corporate-governance/governance-overview>. If we make any substantive amendments to, or grant any waivers from, the code of business conduct and ethics for any officer or director, we will disclose the nature of such amendment or waiver on our website or in a Form 8-K.

Board Leadership Structure and Board's Role in Risk Oversight

Currently, the role of chairperson of the board of directors is separated from the role of Chief Executive Officer. Our Chief Executive Officer is responsible for recommending strategic decisions and capital allocation to

the board of directors and to ensure the execution of the recommended plans. Michael Powell, Ph.D. is our current chairperson of the board of directors. The chairperson of the board of directors is responsible for leading the board of directors in its fundamental role of providing advice to and independent oversight of management. Our board of directors recognizes the time, effort and energy that the Chief Executive Officer is required to devote to her position in the current business environment, as well as the commitment required to serve as our chairperson, particularly as the board of directors' oversight responsibilities continue to grow. While our bylaws and corporate governance guidelines will not require that our chairperson and Chief Executive Officer positions be separate, our board of directors believes that having separate positions is the appropriate leadership structure for us at this time and demonstrates our commitment to good corporate governance.

Risk is inherent to every business, and how well a business manages risk can ultimately determine its success. We face a number of risks, including risks relating to our financial condition, development and commercialization activities, operations, strategic direction and intellectual property. Management is responsible for the day-to-day management of risks we face, while our board of directors, as a whole and through its committees, has responsibility for the oversight of risk management. In its risk oversight role, our board of directors has the responsibility to satisfy itself that the risk management processes designed and implemented by management are adequate and functioning as designed.

The role of the board of directors in overseeing the management of our risks is conducted primarily through committees of the board of directors, as disclosed in the descriptions of each of the committees below and in the charters of each of the committees. The full board of directors (or the appropriate board committee in the case of risks that are under the purview of a particular committee) discusses with management our major risk exposures, their potential impact on us, and the steps we take to manage them. When a board committee is responsible for evaluating and overseeing the management of a particular risk or risks, the chairperson of the relevant committee reports on the discussion to the full board of directors during the committee reports portion of the next board meeting. This enables the board of directors and its committees to coordinate the risk oversight role, particularly with respect to risk interrelationships.

Communication with the Directors of Bicara Therapeutics

Any interested party with concerns about our company may report such concerns to the board of directors or the Chairperson of our board of directors and nominating and corporate governance committee, by submitting a written communication to the attention of such director at the following address:

c/o Bicara Therapeutics Inc.
116 Huntington Avenue, Suite 703
Boston, MA 02116
United States

You may submit your concern anonymously or confidentially by postal mail. You may also indicate whether you are a stockholder, customer, supplier or other interested party.

A copy of any such written communication may also be forwarded to our legal counsel and a copy of such communication may be retained for a reasonable period of time. The director may discuss the matter with our legal counsel, with independent advisors, with non-management directors, or our management, or may take other action or no action as the director determines in good faith, using reasonable judgment and applying his or her own discretion.

Communications may be forwarded to other directors if they relate to important substantive matters and include suggestions or comments that may be important for other directors to know. In general, communications relating to corporate governance and long-term corporate strategy are more likely to be forwarded than communications relating to ordinary business affairs, personal grievances and matters as to which we tend to receive repetitive or duplicative communications.

The audit committee oversees the procedures for the receipt, retention, and treatment of complaints received by Bicara Therapeutics regarding accounting, internal accounting controls, or audit matters, and the confidential, anonymous submission by employees of concerns regarding questionable accounting, internal accounting controls or auditing matters. We have also established a toll-free telephone number for the reporting of such activity, which is (833) 805-1103 and permits submissions on a confidential and anonymous basis.

Executive Officers Who Are Not Directors

The following table identifies our executive officers who are not directors, and sets forth their current positions at Bicara and their ages as of April 15, 2026.

Name	Position Held with Bicara	Officer Since	Age
Ivan Hyep	Chief Financial Officer and Treasurer	2021	41
Lara Meisner, J.D.	Chief Legal Officer, Compliance Officer and Corporate Secretary	2023	54
David Raben, M.D.	Chief Medical Officer	2023	62

Ivan Hyep has served as our Chief Financial Officer since March 2021 and Treasurer since July 2024. Prior to joining Bicara, Mr. Hyep was the Head of Finance of MOMA Therapeutics, Inc., a biotechnology company, from July 2019 to March 2021. Previously, Mr. Hyep was at Third Rock, a life sciences venture capital firm, as the Director of Finance from January 2018 to March 2021 and Senior Finance Manager from January 2016 to December 2017. Prior to that, Mr. Hyep was Finance Manager at Bain Capital, LP, a private investment firm, from July 2006 to January 2016. Mr. Hyep holds a B.S. in Finance from Bentley University and received his M.B.A. from Boston University.

Lara Meisner, J.D. has served as our Chief Legal Officer since November 2023, Corporate Secretary since December 2023, and Compliance Officer since September 2024. Prior to joining Bicara, Ms. Meisner served as the Chief Legal Officer, Compliance Officer, and Corporate Secretary at Viridian Therapeutics, Inc. (Nasdaq: VRDN), a biotechnology company, from December 2020 to November 2023. From February 2017 to November 2020, Ms. Meisner held roles of increasing responsibility at Catabasis Pharmaceuticals, Inc., a publicly traded biopharmaceutical company, most recently as the Vice President, Legal and Corporate Secretary. Ms. Meisner received her J.D. from Temple University Beasley School of Law and her B.A. from the University of Michigan.

David Raben, M.D. has served as our Chief Medical Officer since July 2023 and consulted for us from May 2023 to July 2023. Previously, Dr. Raben was Vice President of late-stage product development at Amgen Inc., a biotechnology company, from November 2021 to May 2023, where he led the FDA-approved tarlatamab program for extensive stage small cell lung cancer. From September 2019 to June 2021, he was Vice President of late-stage product development for lung, skin, head and neck cancer at Genentech, Inc., a biotechnology company. He also served as a Professor of Radiation Oncology at the University of Colorado Health from May 1998 to September 2019. Dr. Raben is a board-certified radiation oncologist with a career focused on investigating novel biologic strategies against growth factor signaling and immunosuppression for patients advanced lung and head and neck cancers. He earned a B.A. in Psychology from Duke University and an M.D. from the Bowman Gray School of Medicine at Wake Forest University, and completed his residency at the Johns Hopkins Hospital.

The principal occupation and employment during the past five years of each of our executive officers was carried on, in each case except as specifically identified in this proxy statement, with a corporation or organization that is not a parent, subsidiary or other affiliate of us. There is no arrangement or understanding between any of our executive officers and any other person or persons pursuant to which he or she was or is to be selected as an executive officer.

There are no material legal proceedings to which any of our directors, executive officers, or affiliates is a party adverse to us or our subsidiary or in which any such person has a material interest adverse to us or our subsidiary.

Director Compensation

The table below shows all compensation earned by or paid to our non-employee directors during the fiscal year ended December 31, 2025. Other than as set forth below, we did not pay any compensation, make any equity awards or non-equity awards to, or pay any other compensation to any of the non-employee members of our board of directors in 2025. Claire Mazumdar, Ph.D., our Chief Executive Officer, and Ryan Cohlhepp, Pharm.D., our President and Chief Operating Officer, served as members of our board of directors and received no additional compensation for their services as members of our board of directors and, consequently, are not included in this table. The compensation received by Dr. Mazumdar and Dr. Cohlhepp during 2025 is set forth in the section of this proxy statement titled “Executive Compensation—2025 Summary Compensation Table.”

Name	Fees Earned or Paid in Cash (\$) ⁽¹⁾	Option Awards(\$) ⁽²⁾	Total (\$)
Christopher Bowden, M.D. ⁽³⁾	45,000	208,634	253,634
Kate Haviland ⁽⁴⁾	45,000	208,634	253,634
Nils Lonberg, Ph.D. ⁽⁵⁾	48,000	208,634	256,634
Kiran Mazumdar-Shaw ⁽⁶⁾	44,000	208,634	252,634
Carolyn Ng, Ph.D. ⁽⁷⁾	—	—	—
Michael Powell, Ph.D. ⁽⁸⁾	87,500	208,634	296,134
Scott Robertson ⁽⁹⁾	55,000	208,634	263,634
Jake Simson, Ph.D. ⁽¹⁰⁾	44,000	208,634	252,634

- (1) The amounts reported represent the cash fees each director received for their services to our board of directors during the year ended December 31, 2025.
- (2) The amounts reported represent the aggregate grant date fair value of the stock option awards granted to our directors during 2025, calculated in accordance with Financial Accounting Standards Board Accounting Standards Codification Topic 718, or FASB ASC Topic 718. Such grant date fair values do not take into account any estimated forfeitures related to service-based vesting. A discussion of the assumptions used in determining grant date fair value may be found in Note 10 to our financial statements in our Annual Report on Form 10-K for the fiscal year ended December 31, 2025. The amounts reported in this column reflect the accounting cost for these stock option awards and do not correspond to the actual economic value that may be received by our directors upon the exercise of the stock option awards or any sale of the underlying shares.
- (3) As of December 31, 2025, Dr. Bowden held outstanding options to purchase an aggregate of 83,247 shares of our common stock.
- (4) As of December 31, 2025, Ms. Haviland held outstanding options to purchase an aggregate of 99,555 shares of our common stock.
- (5) As of December 31, 2025, Dr. Lonberg held outstanding options to purchase an aggregate of 85,776 shares of our common stock.
- (6) As of December 31, 2025, Ms. Mazumdar-Shaw held outstanding options to purchase an aggregate of 55,826 shares of our common stock.
- (7) As of December 31, 2025, Dr. Ng did not hold outstanding options to purchase shares of our common stock. Dr. Ng has waived her right to participate in our non-employee director compensation program due to her affiliation with TPG Life Sciences Innovations and its affiliated funds, and accordingly, does not receive any stock options or cash fees for her services as a member of our board.
- (8) As of December 31, 2025, Dr. Powell held outstanding options to purchase an aggregate of 83,247 shares of our common stock.
- (9) As of December 31, 2025, Mr. Robertson held outstanding options to purchase an aggregate of 106,993 shares of our common stock.
- (10) As of December 31, 2025, Dr. Simson held outstanding options to purchase an aggregate of 47,492 shares of our common stock. Dr. Simson is affiliated with RA Capital Management L.P. and pursuant to the internal policies of RA Capital Management L.P., Dr. Simson holds these stock options as a nominee on behalf, and for the sole benefit, of RA Capital Management L.P. and has disclaimed beneficial ownership over these options and the underlying shares of common stock.

Non-Employee Director Compensation Policy

Our non-employee director compensation policy is designed to enable us to attract and retain, on a long-term basis, highly qualified non-employee directors. Under the policy, we pay our non-employee directors a cash retainer for service on the board of directors and for service on each committee on which the director is a member. The chairman of each committee receives a higher retainer for such service. In August 2024, our board of directors adopted the non-employee director compensation policy, or the original director compensation policy, that became effective upon our IPO in September 2024. The original director compensation policy was amended by our board of directors in December 2025 to increase the annual cash retainer amounts, with effectiveness for the first quarterly payment in 2026, and further amended and restated in January 2026, or the A&R director compensation policy, to

decrease the share amounts of the Initial Award and Annual Award (as each such term is defined below). The annual retainers for our non-employee directors during the fiscal years ended December 31, 2025 and December 31, 2026 pursuant to the original director compensation policy and our currently effective A&R director compensation policy, respectively, are as follows (payable quarterly in arrears and prorated for partial years of service):

	2025 Annual Retainer	2026 Annual Retainer
Board of Directors:		
Members	\$ 40,000	\$ 40,000
Additional retainer for non-executive chair	\$ 30,000	\$ 30,000
Additional retainer for lead independent director*	\$ 20,000	\$ 20,000
Additional Annual Retainer for Committee Membership:		
Audit Committee:		
Members (other than chair)	\$ 7,500	\$ 10,000
Chair	\$ 15,000	\$ 20,000
Compensation Committee:		
Members (other than chair)	\$ 5,000	\$ 7,500
Chair	\$ 10,000	\$ 15,000
Nominating and Corporate Governance Committee:		
Members (other than chair)	\$ 4,000	\$ 5,000
Chair	\$ 8,000	\$ 10,000

* Our board of directors did not have a lead independent director at any time during 2025, and the position remains vacant as of the date of this proxy statement.

The A&R director compensation policy provides that, upon initial election or appointment to our board of directors, each non-employee director will be granted a one-time stock option award to purchase 38,950 shares of our common stock, or Initial Award. During 2025 and prior to the effectiveness of the A&R director compensation policy, the Initial Award was for 47,492 shares of our common stock. The Initial Award will vest over three years from the grant date, with one-third vesting on the first anniversary of the grant date and the remainder vesting in equal monthly installments thereafter, subject to continued service through the applicable vesting date. The Initial Award will expire ten years from the date of grant and have an exercise price per share equal to the fair market value of our common stock on the date of grant.

Furthermore, under the A&R director compensation policy, on the date of each annual meeting of stockholders, each non-employee director (other than a director receiving an Initial Award) who continues as a non-employee director following such meeting will be granted an annual stock option award to purchase 19,475 shares of our common stock, or Annual Award. During 2025 and prior to the effectiveness of the A&R director compensation policy, the Annual Award was for 23,746 shares of our common stock. The Annual Award will vest on the earlier of (i) the one-year anniversary of the grant date or (ii) the next Annual Meeting of Stockholders, subject to continued service through the applicable vesting date. The Annual Award will expire ten years from the date of grant and have an exercise price per share equal to the fair market value of our common stock on the date of grant. If a non-employee director joins the board of directors on a date other than the date of our Annual Meeting of Stockholders, then, at the next Annual Meeting of Stockholders, in lieu of the Annual Award, such director will be granted a pro-rata portion of the Annual Award based on the number of full months between such director's initial election or appointment and the such Annual Meeting of Stockholders.

The Initial Award and the Annual Award are subject to full accelerated vesting upon the sale of the Company.

The aggregate amount of compensation, including both equity compensation and cash compensation, paid to any non-employee director for service as a non-employee director in a calendar year period will not exceed

\$1,000,000 in the first calendar year such individual becomes a non-employee director and \$750,000 in any other calendar year.

We will reimburse all reasonable out-of-pocket expenses incurred by directors for their attendance at meetings of our board of directors or any committee thereof.

EXECUTIVE COMPENSATION

This section describes the material elements of compensation awarded to, earned by or paid to our named executive officers during the fiscal year ended December 31, 2025, who were Claire Mazumdar, Ph.D., our Chief Executive Officer, Ryan Cohlhepp, Pharm.D., our President and Chief Operating Officer, and David Raben, M.D., our Chief Medical Officer. These individuals represent our principal executive officer and our two most highly compensated executive officers (other than our principal executive officer) who were serving as executive officers on December 31, 2025. We are an “emerging growth company,” within the meaning of the Jumpstart Our Business Startups Act of 2012, or the JOBS Act, and have elected to comply with the reduced compensation disclosure requirements available to emerging growth companies under the JOBS Act. This section also provides qualitative information regarding the manner and context in which compensation is awarded to and earned by our named executive officers and is intended to place in perspective the data presented in the tables and narrative that follow.

2025 Summary Compensation Table

The following table presents the compensation awarded to, earned by or paid to each of our named executive officers for services rendered to us in all capacities during the years indicated.

Name and Principal Position	Year	Salary (\$)	Bonus (\$) ⁽¹⁾	Option Awards (\$) ⁽²⁾	Non-Equity Incentive Plan Compensation (\$) ⁽³⁾	All Other Compensation (\$) ⁽⁴⁾	Total (\$)
Claire Mazumdar, Ph.D. <i>Chief Executive Officer</i>	2025	625,000	—	—	292,188	10,500	927,688
	2024	517,500	287,000	8,088,723	10,000	15,300	8,918,523
Ryan Cohlhepp, Pharm.D. <i>President and Chief Operating Officer</i>	2025	588,000	10,000	—	249,900	10,500	858,400
	2024	517,500	278,000	3,641,839	10,000	20,250	4,467,589
David Raben, M.D. <i>Chief Medical Officer</i> ⁽⁵⁾	2025	525,000	5,000	—	170,625	8,539	709,164

- (1) In the cases of Dr. Cohlhepp and Dr. Raben, the amount reported during the fiscal year ended December 31, 2025 represent referral bonuses in the amounts of \$10,000 and \$5,000, respectively. For more information on these bonuses, see the description of the cash incentive bonuses under “2025 Cash Incentive Compensation” below.
- (2) The amounts reported represent the aggregate grant date fair value of stock option awards granted to our named executive officers during the applicable fiscal years, computed in accordance with FASB ASC Topic 718. Such grant date fair values do not take into account any estimated forfeitures related to service-based vesting. A discussion of the assumptions used in determining grant date fair value may be found in Note 10 to our financial statements in our Annual Report on Form 10-K for the year ended December 31, 2025. These amounts do not correspond to the actual value that may be recognized by the named executive officers upon exercise of the applicable award or sale of the underlying shares of stock.
- (3) The amounts reported for the fiscal year ended December 31, 2025 represent the annual bonuses each named executive officer earned under our annual cash bonus program based on achievement of company performance and individual performance during the applicable fiscal year, which were paid in the first quarter of fiscal year following the applicable fiscal year.
- (4) The amounts reported represent employer profit sharing contributions and employer matching contributions earned by our named executive officers under our 401(k) plan during the applicable fiscal years.
- (5) Dr. Raben was not a named executive officer for the fiscal year ended December 31, 2024.

Narrative to Summary Compensation Table

Our board of directors and compensation committee review compensation annually for our executives. In setting executive base salaries and bonuses and granting equity incentive awards, we consider compensation for comparable positions in the market, the historical compensation at Bicara of our executives, individual performance as compared to our expectations and objectives, our desire to motivate our employees to achieve short- and long-term results that are in the best interests of our stockholders, and a long-term commitment to our Company. We target a general competitive position, based on independent third-party benchmark analytics to inform the mix of compensation of base salary, bonus and long-term incentives.

Our compensation committee is primarily responsible for determining the compensation for our executive officers. Our compensation committee typically reviews and discusses management's proposed compensation with our Chief Executive Officer for all executives other than the Chief Executive Officer. Based on those discussions and its discretion, taking into account the factors noted above, the compensation committee then sets the compensation for each executive officer other than the Chief Executive Officer and President and Chief Operating Officer and recommends the compensation for the Chief Executive Officer and President and Chief Operating Officer to our board of directors for approval. Our board of directors discusses the compensation committee's recommendation and ultimately approves the compensation of our Chief Executive Officer and President and Chief Operating Officer without members of management present. Our compensation committee may delegate certain authorities to a subcommittee comprised of one or more members of the board of directors or one or more officers of the Company, including our Chief Executive Officer, and has delegated to our Chief Executive Officer the authority to make certain equity award grants to employees (other than our executive officers), within specified limits approved by the compensation committee.

Our compensation committee has the authority to engage the services of a consulting firm or other outside advisor to assist it in designing our executive compensation programs and in making compensation decisions. During the fiscal year ended December 31, 2025, the compensation committee retained the services of Pearl Meyer as its external compensation consultant to advise on executive and director compensation matters including our overall compensation program design and collection of market data to inform our compensation programs for our executive officers and members of our board of directors. During the fiscal year ended December 31, 2025, Pearl Meyer did not provide any additional services besides advising the compensation committee on such compensation matters. Pearl Meyer reports directly to our compensation committee. Our compensation committee annually assesses its independence consistent with Nasdaq listing standards and concluded that the engagement of such consultant did not raise any conflict of interest.

2025 Base Salaries

Our named executive officers each receive a base salary to compensate them for services rendered to our Company. The base salary payable to each named executive officer is intended to provide a fixed component of compensation reflecting the executive's skill set, experience, role and responsibilities. Base salaries are reviewed annually, typically in connection with our annual performance review process, approved by our board of directors or the compensation committee of the board of directors, and may be adjusted from time to time to realign salaries with market levels after taking into account individual responsibilities, performance and experience.

The annual base salaries for each of our named executive officers for the fiscal year ended December 31, 2025 are set forth in the table below:

Name	Base Salary
Claire Mazumdar, Ph.D.	\$ 625,000
Ryan Cohlhepp, Pharm.D.	\$ 588,000
David Raben, M.D.	\$ 525,000

2025 Cash Incentive Compensation

For the fiscal year ended December 31, 2025, each of our named executive officers was eligible to earn an annual cash bonus based on the Company's achievement of certain performance objectives, as determined by our board of directors. The target annual bonus for each of our named executive officers for the fiscal year ended December 31, 2025 was equal to the percentage of the executive's respective annual base salary specified below:

Name	Target Bonus Percentage for Fiscal Year 2025
Claire Mazumdar, Ph.D.	55 %
Ryan Cohlhepp, Pharm.D.	50 %
David Raben, M.D.	40 %

Following review and determination of our corporate performance and individual performance for 2025, the board of directors determined to pay an annual cash bonus to each of our named executive officers for the fiscal year ended December 31, 2025, in the amount as set forth in the “Non-Equity Incentive Plan Compensation” column of the “2025 Summary Compensation Table” above.

During the fiscal year ended December 31, 2025, Dr. Cohlhepp and Dr. Raben also received cash referral bonuses in amounts equal to \$10,000 and \$5,000, respectively, as reported under the “Bonus” column in the “2025 Summary Compensation Table” above. Under our referral bonus program, employees are eligible to receive a referral bonus in the amount of \$5,000 for each new hire referred to the Company, which amount is payable on the six-month anniversary of the referred employee’s start date with the Company.

2025 Equity-Based Compensation

We believe that equity grants provide our executives with a strong link to our long-term performance, create an ownership culture and help to align the interests of our executives and our stockholders. In addition, we believe that equity grants promote executive retention because they incentivize our executive officers to remain in our employment during the vesting period. Accordingly, our board of directors or our compensation committee periodically reviews the equity incentive compensation of our named executive officers and may grant equity incentive awards to them from time to time. During the fiscal year ended December 31, 2025, we did not grant equity awards to named executive officers due to grants received by such individuals during the fiscal year ended December 31, 2024 in connection with our IPO. For additional information regarding outstanding equity awards held by our named executive officers as of December 31, 2025, see the “Outstanding Equity Awards at 2025 Fiscal Year End” table below.

401(k) Plan

We currently maintain a tax-qualified 401(k) retirement savings plan for our employees, including our named executive officers, who satisfy certain eligibility requirements. Our named executive officers are eligible to participate in the 401(k) plan on the same terms as other full-time employees. Our 401(k) plan is intended to qualify for favorable tax treatment under Section 401(a) of the Code and contains a cash or deferred feature that is intended to meet the requirements of Section 401(k) of the Code. Pursuant to our 401(k) plan we match 50% of each participating eligible employee's annual contributions to the plan, up to 6% of such employee's compensation for such year. Our 401(k) plan also provides for a profit-sharing component. No profit-sharing contributions were made in 2025. We believe that providing a vehicle for tax-deferred retirement savings through our 401(k) plan adds to the overall desirability of our executive compensation package and further incentivizes our employees, including our named executive officers, in accordance with our compensation policies. Other than the 401(k) plan, we do not provide any qualified or non-qualified retirement or deferred compensation benefits to our employees, including our named executive officers.

Other Benefits and Perquisites

Perquisites and other personal benefits are not a significant component of our executive compensation program. Accordingly, we do not provide perquisites or personal benefits to our named executive officers.

Outstanding Equity Awards at 2025 Fiscal Year End

The following table lists all outstanding equity awards held by our named executive officers as of December 31, 2025.

Name	Grant Date	Vesting Commencement Date	Option Awards ⁽¹⁾			
			Number of Securities Underlying Unexercised Options (#) Exercisable	Number of Securities Underlying Unexercised Options (#) Unexercisable	Option Exercise Price (\$)	Option Expiration Date
Claire Mazumdar, Ph.D.	11/19/2021	11/8/2021	90,981 ⁽²⁾	— ⁽²⁾	4.10	11/19/2031
	11/19/2021	11/8/2021	8,334 ⁽²⁾	— ⁽²⁾	4.10	11/19/2031
	10/4/2022	10/4/2022	48,683 ⁽²⁾	16,227 ⁽²⁾	4.44	10/4/2032
	4/5/2023	4/5/2023	69,035 ⁽²⁾	68,965 ⁽²⁾	3.79	4/5/2033
	8/8/2023	8/8/2023	73,057 ⁽²⁾	163,050 ⁽²⁾	3.79	8/8/2033
	12/14/2023	12/14/2023	268,008 ⁽²⁾	297,504 ⁽²⁾	5.45	12/14/2033
Ryan Cohlhepp, Pharm.D.	8/13/2024	8/13/2024	356,670 ⁽²⁾	784,672 ⁽²⁾	9.24	8/13/2034
	11/19/2021	11/8/2021	3,126 ⁽²⁾	— ⁽²⁾	4.10	11/19/2031
	11/19/2021	11/8/2021	17,710 ⁽²⁾	— ⁽²⁾	4.10	11/19/2031
	10/4/2022	10/4/2022	23,682 ⁽²⁾	16,227 ⁽²⁾	4.44	10/4/2032
	4/5/2023	4/5/2023	44,627 ⁽²⁾	44,625 ⁽²⁾	3.79	4/5/2033
	8/8/2023	8/8/2023	35,080 ⁽²⁾	106,254 ⁽²⁾	3.79	8/8/2033
David Raben, M.D.	12/14/2023	12/14/2023	189,324 ⁽²⁾	189,320 ⁽²⁾	5.45	12/14/2033
	8/13/2024	8/13/2024	160,587 ⁽²⁾	353,287 ⁽²⁾	9.24	8/13/2034
	8/8/2023	7/24/2023	32,983 ⁽³⁾	66,004 ⁽³⁾	3.79	8/8/2033
	8/8/2023	8/8/2023	31,550 ⁽²⁾	37,863 ⁽²⁾	3.79	8/8/2033
	12/14/2023	12/14/2023	57,812 ⁽²⁾	77,080 ⁽²⁾	5.45	12/14/2033
	8/13/2024	8/13/2024	67,615 ⁽²⁾	148,753 ⁽²⁾	9.24	8/13/2034

- (1) Each award granted prior to September 2024 was granted under the Bicara Therapeutics Inc. 2019 Stock Option and Grant Plan, as amended from time to time, or the 2019 Plan, and each award granted during or after September 2024 was granted under the Bicara Therapeutics Inc. 2024 Stock Option and Grant Plan, or the 2024 Plan.
- (2) The shares underlying the stock option award vest in 16 equal quarterly installments over a four-year period, commencing on the vesting commencement date, subject to the applicable named executive officer's continued service through the applicable vesting date. The award is also subject to certain accelerated vesting rights as set forth in the applicable named executive officer's Employment Agreement, as described below.
- (3) 25% of the shares underlying this option vested on the first anniversary of the vesting commencement date, with the remainder vesting in 12 equal quarterly installments thereafter, subject to the applicable named executive officer's continued service through the applicable vesting date. The award is also subject to certain accelerated vesting rights as set forth in the applicable named executive officer's Employment Agreement, as described below.

Employment Arrangements for Named Executive Officers

The Company entered into second amended and restated employment agreements with Dr. Mazumdar and Dr. Cohlhepp and an amended and restated employment agreement with Dr. Raben, or collectively, the Employment Agreements, that supersede in all respects all prior employment agreements, offer letters and severance agreements between Dr. Mazumdar, Dr. Cohlhepp, and Dr. Raben, respectively, and the Company.

Under the Employment Agreements, each of the named executive officers continues to serve in their respective roles on an at-will basis. The Employment Agreements provide for each named executive officer's base salary, which is subject to periodic review by our board of directors or the compensation committee, and a target annual cash incentive opportunity, with the actual amount of any annual cash bonus determined by our board of directors or the compensation committee, subject to the terms of any applicable incentive compensation plan that may be in effect from time to time. The named executive officers are also eligible to participate in the Company's U.S. employee benefit plans available to employees, subject to the terms of those plans. Dr. Raben is also entitled to reimbursement for all travel expenses, including travel between his remote home office in Colorado and the Company's headquarters, as well as business class travel for any trips where the air or train portion is three hours or longer.

Pursuant to the Employment Agreements, in the event that a named executive officer's employment terminates for any reason, the named executive officer shall be entitled to (i) any Base Salary earned through the Date of Termination (as such terms are defined in the Employment Agreements); (ii) unpaid expense reimbursements; (iii) if the Date of Termination occurs after the completion of a calendar year but prior to the payment of annual bonuses for such year, the Company will pay the named executive officer the bonus amount that the named executive officer otherwise would have earned if the named executive officer remained employed on the date of payment, as determined in the sole discretion of the board or compensation committee; and (iv) any vested benefits the named executive officer may have under any employee benefit plan of the Company through the Date of Termination, which vested benefits shall be paid and/or provided in accordance with the terms of such employee benefit plans. In addition, if the named executive officer's employment with the Company is terminated due to the named executive officer's death or disability, then subject to the Company's attainment of the applicable preestablished performance goals for the calendar year in which the Date of Termination occurs, if any, a pro rata portion of the Target Bonus (as defined in the Employment Agreements) which would have been earned by the named executive officer with respect to such calendar year, based upon the number of days the named executive officer was employed with the Company during such calendar year.

Pursuant to the Employment Agreements, in the event that a named executive officer's employment is terminated by the Company without "Cause" or the named executive officer resigns for "Good Reason," in either case outside of a "Change in Control Period" (as each term is defined in the Employment Agreements), subject to the applicable named executive officer signing a separation agreement and release of claims in the Company's favor and such separation agreement and release becoming fully effective no more than 60 days after the termination date (a "Release"), such named executive officer will be entitled to receive (i) Base Salary continuation for 12 months following termination and (ii) subject to the applicable named executive officer's copayment of premium amounts at the applicable active employees' rate and proper election to continue COBRA health coverage, payment of the portion of the premium equal to the amount that we would have paid to provide health insurance to such named executive officer had he or she remained employed with the Company until the earliest of (A) 12 months following termination, (B) the applicable named executive officer's eligibility for group medical plan benefits under any other employer's group medical plan, or (C) at the end of the applicable named executive officer's COBRA health continuation period.

Pursuant to the Employment Agreements, in lieu of the payments and benefits described in the preceding paragraph, in the event that the named executive officer's employment is terminated by the Company without Cause or the NEO resigns for Good Reason, in either case within a "Change in Control Period" and the "Change in Control" is not a "Specified Transaction" (as those terms are defined in the Employment Agreements), subject to the applicable named executive officer signing and not revoking a Release, the named executive officer will be entitled to receive (i) the named executive officer's then-current Base Salary (or such named executive officer's annual Base Salary in effect immediately prior to the Change in Control, if higher), payable in a lump sum, (ii) subject to applicable named executive officer's copayment of premium amounts at the applicable active employees' rate and proper election to continue COBRA health coverage, payment of the portion of the premium equal to the amount that the Company would have paid to provide health insurance to such named executive officer had he or she remained employed with the Company until the earliest of (A) 12 months following termination, (B) the applicable named executive officer's eligibility for group medical plan benefits under any other employer's group medical plan, or (C) the end of the applicable named executive officer's COBRA health continuation period, and (iii) full accelerated vesting of 100% of all stock options and other stock-based awards subject solely to time-based vesting held by such named executive officer.

Pursuant to the Employment Agreements, in the event that the named executive officer's employment is terminated by the Company without Cause or the named executive officer resigns for Good Reason, in either case within a Change in Control Period and the Change in Control is a Specified Transaction, subject to the applicable named executive officer entering into and not revoking a Release, and lieu of the payments and benefits in the preceding paragraphs, (1) Dr. Mazumdar and Dr. Cohlhepp shall receive (i) a lump sum cash in the amount of 1.5 x the sum of their respective Base Salary and Target Bonus, (ii) subject to applicable named executive officer's copayment of premium amounts at the applicable active employees' rate and proper election to continue COBRA health coverage, payment of the portion of the premium equal to the amount that the Company would have paid to provide health insurance to such named executive officer had they remained employed with the Company until the

earliest of (A) 18 months following the Date of Termination, (B) the applicable named executive officer's eligibility for group medical plan benefits under any other employer's group medical plan, or (C) the end of the applicable named executive officer's COBRA health continuation period, and (iii) full accelerated vesting of 100% of all stock options and other stock-based awards subject solely to time-based vesting held by such named executive officer, and (2) Dr. Raben shall receive a lump sum cash in the amount of his Base Salary and Target Bonus.

Pursuant to the Employment Agreements, the Change in Control Period shall be the one-year period following the Change in Control, provided that if the Change in Control is a Specified Transaction, the Change in Control Period shall also include the three months before the Change in Control.

Pursuant to the Employment Agreements, if the payments and benefits payable to the applicable named executive officer in connection with a Change in Control would be subject to the excise tax on golden parachutes imposed under Section 4999 of the Code, then those payments or benefits will be reduced if such reduction would result in a higher net after-tax benefit to the applicable named executive officer than if he or she had been paid the full amount of such payments and benefits, with such amount subject to the excise tax.

Each named executive officer has also entered into a standard form agreement with respect to confidential information, intellectual property assignment and non-competition and non-solicitation restrictions.

Compensation Risk Assessment

We believe that although a portion of the compensation provided to our executive officers and other employees is performance-based, our executive compensation program does not encourage excessive or unnecessary risk taking. Our compensation programs are designed to encourage our executive officers and other employees to remain focused on both short-term and long-term strategic goals, in particular in connection with our pay-for-performance compensation philosophy. As a result, we do not believe that our compensation programs are reasonably likely to have a material adverse effect on us.

Equity Compensation Plan Information

The following table provides information as of December 31, 2025 with respect to the shares of our common stock that may be issued under our existing equity compensation plans.

Equity Compensation Plan Information			
Plan Category	Number of securities to be issued upon exercise of outstanding options, warrants and rights	Weighted average exercise price of outstanding options, warrants and rights ⁽¹⁾	Number of securities remaining available for future issuance under equity compensation plans (excluding securities in first column)
Equity compensation plans approved by security holders ⁽²⁾	9,850,977 ⁽³⁾	\$ 9.03	2,562,635 ⁽⁴⁾
Equity compensation plans not approved by security holders	—	—	—
Total	\$ 9,850,977	\$ 9.03	\$ 2,562,635

- (1) The weighted average exercise price is calculated based solely on outstanding stock options.
- (2) Includes the following plans: our 2019 Plan, our 2024 Plan and our 2024 Employee Stock Purchase Plan, or the 2024 ESPP.
- (3) Includes 9,850,977 shares subject to stock option awards that were outstanding as of December 31, 2025 that were issued under the 2019 Plan and the 2024 Plan.
- (4) As of December 31, 2025, a total of 2,562,635 shares of our common stock have been reserved for issuance pursuant to the 2024 Plan. The 2024 Plan provides that the number of shares reserved and available for issuance under the plan will automatically increase each January 1, beginning on January 1, 2025, by 5% of the Outstanding Shares (as defined in the 2024 Plan and which includes the number of shares issued and outstanding as well as the number of shares issuable pursuant to the exercise of any outstanding, pre-funded warrants to acquire stock for a nominal exercise price) on the immediately preceding December 31 or such lesser number of shares as determined by the Administrator (as such term is defined in the 2024 Plan). This number is subject to adjustment in the event of a stock split, stock dividend or other change in our capitalization. The shares of common stock underlying any awards that are forfeited, cancelled, held back upon exercise or settlement of an award to satisfy the exercise price or tax withholding, reacquired by us prior to vesting, satisfied without the issuance of stock, expire or are otherwise terminated, other than by exercise, under the 2024 Plan and the 2019 Plan will be added back to the shares of common stock available for issuance under the 2024 Plan. We no longer make grants under the 2019 Plan. As of December 31, 2025, a total of 507,383 shares of our common stock have been reserved for issuance pursuant to the 2024 ESPP. The 2024 ESPP provides that the number of shares reserved and available for issuance under the plan will automatically increase each January 1, beginning on January 1, 2025, by the least of (i) 1,014,766 shares of our common stock, (ii) 1% of the Outstanding Shares (as defined in the 2024 ESPP and which includes the number of shares issued and outstanding as well as the number of shares issuable pursuant to the exercise of any outstanding, pre-funded warrants to acquire stock for a nominal exercise price) on the immediately preceding December 31, or (iii) such lesser number of shares as determined by the Administrator (as such term is defined in the 2024 ESPP). This number is subject to adjustment in the event of a stock split, stock dividend or other change in our capitalization. Shares of our common stock available for issuance as of December 31, 2025 pursuant to the 2024 Plan exclude the 2,830,036 shares that were added to the plans as a result of the automatic annual increase on January 1, 2026. The Administrator elected to waive the 2026 automatic annual increase under the 2024 ESPP.

In January 2026, our board of directors adopted the Bicara Therapeutics Inc. 2026 Inducement Plan, or the Inducement Plan, and reserved 1,000,000 shares of common stock for future issuance under the Inducement Plan. The Inducement Plan provides for the grant of non-qualified stock options, stock appreciation rights, restricted stock awards, restricted stock units, unrestricted stock awards and dividend equivalent rights to newly hired employees as a material inducement to accept employment with us in accordance with Nasdaq Listing Rule 5635(c)(4). The Inducement Plan has not been approved by our stockholders.

CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

Other than the compensation agreements and other arrangements described under the headings “Executive Compensation” and “Director Compensation” in this proxy statement and the transactions described below, since January 1, 2024, there has not been and there is not currently proposed, any transaction or series of similar transactions to which we were, or will be, a party in which the amount involved exceeded, or will exceed, \$120,000 (or, if less, 1% of the average of our total assets amounts at December 31, 2024 and 2025, as applicable) and in which any director, executive officer, holder of five percent or more of any class of our capital stock or any member of the immediate family of, or entities affiliated with, any of the foregoing persons, had, or will have, a direct or indirect material interest.

Participation in our IPO

In September 2024, we completed our initial public offering, in which we issued and sold 20,125,000 shares of our common stock (inclusive of 2,625,000 shares of common stock sold pursuant to the underwriters' exercise of their option to purchase additional shares) at the public offering price at \$18.00 per share. The aggregate gross proceeds to us from the initial public offering were approximately \$362.3 million, before deducting underwriting discounts and commissions and other offering expenses. The following table sets forth the number of shares of our common stock purchased by our directors, executive officers and five percent stockholders and their affiliates and the aggregate purchase price paid for such shares:

Stockholder	Shares of Common Stock	Total Purchase Price
Entities affiliated with RA Capital Management, L.P. ⁽¹⁾	1,833,000	\$ 32,994,000
T. Rowe Price Investment Management, Inc. ⁽²⁾	1,500,000	\$ 27,000,000
FMR LLC ⁽³⁾	1,500,000	\$ 27,000,000
TPG LSA Rise Butterfly, LP ⁽⁴⁾	1,050,000	\$ 18,900,000
Entities affiliated with Invus Public Equities, L.P. ⁽⁵⁾	825,000	\$ 14,850,000
Vestal Point Capital, LP ⁽⁶⁾	400,000	\$ 7,200,000

- (1) Entities affiliated with RA Capital Management, L.P., or RA Capital, hold five percent or more of our capital stock. Jake Simson, Ph.D. is a partner at RA Capital and a member of our board of directors.
- (2) Such entity holds five percent or more of our capital stock.
- (3) Such entity holds five percent or more of our capital stock.
- (4) Carolyn Ng, Ph.D. is a business unit partner at TPG and a member of our board of directors.
- (5) Entities affiliated with Invus Public Equities, L.P., or Invus, hold five percent or more of our capital stock.
- (6) Such entity holds five percent or more of our capital stock.

Participation in our February 2026 Public Offering

In February 2026, we completed a follow-on public offering, in which we issued and sold 8,581,250 shares of our common stock (inclusive of 1,406,250 shares of common stock sold pursuant to the underwriters' exercise of their option to purchase additional shares) at the public offering price at \$16.00 per share and pre-funded warrants to purchase 2,200,000 shares of common stock at a public offering price of \$15.9999, which is the public offering price per share of common stock less the \$0.0001 exercise price per share for the pre-funded warrants. The aggregate gross proceeds to us from the initial public offering were approximately \$172.5 million, before deducting underwriting discounts and commissions and other offering expenses. The following table sets forth the number of shares of our common stock purchased by our directors, executive officers and five percent stockholders and their affiliates and the aggregate purchase price paid for such shares:

Stockholder	Shares of Common Stock	Pre-funded Warrants to Purchase Shares of Common Stock	Total Purchase Price
T. Rowe Price Investment Management, Inc. ⁽¹⁾	2,625,000	—	\$ 42,000,000
Entities affiliated with RA Capital Healthcare Fund, L.P. ⁽²⁾	300,000	2,200,000	\$ 40,000,000
Vestal Point Capital, LP ⁽³⁾	1,500,000	—	\$ 24,000,000
Entities affiliated with Invus Private Equities, LP ⁽⁴⁾	750,000	—	\$ 12,000,000

(1) Such entity holds five percent or more of our capital stock.

(2) Entities affiliated with RA Capital hold five percent or more of our capital stock. Dr. Simson is a partner at RA Capital and a member of our board of directors.

(3) Such entity holds five percent or more of our capital stock.

(4) Entities affiliated with Invus hold five percent or more of our capital stock.

Agreements with Our Stockholders

Entities Affiliated with Biocon

Entities affiliated with Biocon Limited, or collectively Biocon, hold greater than five percent of our securities, and Ms. Mazumdar-Shaw is the Executive Chairperson of Biocon and a member of our board of directors. Below is a summary of the transactions between Biocon and us since January 1, 2024.

Syngene Agreements

On July 17, 2019, we entered into a contract manufacturing agreement with a wholly-owned subsidiary of Biocon, Syngene International Limited, or Syngene, which was amended and restated on April 1, 2020 as the amended and restated manufacturing service agreement, and further amended on May 18, 2022, August 1, 2022, July 1, 2023, August 1, 2024, November 12, 2024 and October 31, 2025, or the Syngene Manufacturing Services Agreement. In addition, on July 24, 2020, we entered into a master contract services agreement, as amended on August 1, 2022, June 1, 2022, September 20, 2023, August 1, 2024, November 1, 2024 and December 31, 2025, or the Syngene Master Contract Services Agreement. We refer to the Syngene Master Contract Services Agreement together with the Syngene Manufacturing Services Agreement as the Syngene Agreements. Pursuant to the terms of the Syngene Agreements, Syngene manufactures and supplies specified quantities of products to us to be used in research and development as per purchase orders executed from time to time and performs additional contract research services under the master contract services agreement. The Syngene Manufacturing Services Agreement expires on the later of October 31, 2027 or the completion of services under all work orders under the agreement. The Syngene Master Contract Services Agreement expires on the later of November 1, 2031 or the completion of all services under the statements of work under the agreement. On December 16, 2024, we entered into an additional master contract services agreement with Syngene, whereby Syngene agreed to provide us with dedicated research laboratories and personnel, or the Dedicated Center Agreement. The Dedicated Center Agreement expires on the later of December 16, 2028 or the completion of all services under all statements of work under the agreement. For the years ended December 31, 2025 and 2024, we incurred \$18.5 million and \$7.2 million of research and development expenses, respectively, under the Syngene Agreements. We believe that all transactions with Syngene have been entered into in the ordinary course of business.

Biocon Biologics Limited Agreements

On July 23, 2019, we entered into a contract manufacturing agreement with a wholly-owned subsidiary of Biocon, Biocon Biologics Limited (formerly Biocon Biologics India Limited), or BBL, which was amended on November 6, 2024 to extend the term of the contract manufacturing agreement until July 23, 2026. Additionally, we entered into a material transfer agreement on August 17, 2023, a quality agreement on October 12, 2023, a service agreement on October 18, 2023, and a manufacturing service agreement on December 15, 2023, or collectively, the BBL Agreements. Pursuant to the terms of the BBL Agreements, BBL manufactures and supplies specified

quantities of products to us to be utilized in research and development and manufacturing as per purchase orders executed from time to time between us and BBL. For the years ended December 31, 2025 and 2024, we incurred \$0.1 million and \$1.0 million research and development expenses, respectively, under the BBL Agreements. We believe that all transactions with BBL have been entered into in the ordinary course of business.

Indemnification Agreements

We have entered into agreements to indemnify our directors and executive officers. These agreements, among other things, require us to indemnify these individuals for certain expenses (including attorneys' fees), judgments, fines and settlement amounts reasonably incurred by such person in any action or proceeding, including any action by or in our right, on account of any services undertaken by such person on behalf of our Company or that person's status as a member of our board of directors to the maximum extent allowed under Delaware law.

Related Person Transaction Policy

Our board of directors reviews and approves transactions with directors, officers and holders of five percent or more of our voting securities and their affiliates, each a related party. The material facts as to the related party's relationship or interest in the transaction are disclosed to our board of directors prior to their consideration of such transaction, and the transaction is not considered approved by our board of directors unless a majority of the directors who are not interested in the transaction approve the transaction. Further, when stockholders are entitled to vote on a transaction with a related party, the material facts of the related party's relationship or interest in the transaction are disclosed to the stockholders, who must approve the transaction in good faith.

We have adopted a written related party transactions policy that such transactions must be approved by our audit committee.

PRINCIPAL STOCKHOLDERS

The following table sets forth information, to the extent known by us or ascertainable from public filings, with respect to the beneficial ownership of our common stock as of April 15, 2026 by:

- each of our directors;
- each of our named executive officers;
- all of our directors and executive officers as a group; and
- each person, or group of affiliated persons, who is known by us to beneficially own of greater than five percent of our common stock.

The column entitled “Shares Beneficially Owned” is based on a total of 65,600,370 shares of our common stock outstanding as of April 15, 2026.

Beneficial ownership is determined in accordance with the rules and regulations of the SEC and includes voting or investment power with respect to our common stock. Shares of our common stock subject to options that are currently exercisable or exercisable within 60 days of April 15, 2026 are considered outstanding and beneficially owned by the person holding the options for the purpose of calculating the percentage ownership of that person but not for the purpose of calculating the percentage ownership of any other person. Except as otherwise noted, the persons and entities in this table have sole voting and investing power with respect to all of the shares of our common stock beneficially owned by them, subject to community property laws, where applicable. Except as otherwise indicated in the table below, addresses of named beneficial owners are in care of Bicara Therapeutics Inc., 116 Huntington Avenue, Suite 703, Boston, MA 02116.

Name of Beneficial Owner	Shares Beneficially Owned	Percentage of Shares Beneficially Owned
Greater-than-five Percent Stockholders:		
Entities affiliated with RA Capital Management, L.P. ⁽¹⁾	7,303,485	11.1 %
T. Rowe Price Investment Management, Inc. ⁽²⁾	6,605,780	10.1 %
Entities affiliated with Biocon Ltd ⁽³⁾	5,523,897	8.4 %
Entities affiliated with Invus Public Equities, L.P. ⁽⁴⁾	5,216,969	8.0 %
Vestal Point Capital, LP ⁽⁵⁾	3,575,000	5.4 %
FMR LLC ⁽⁶⁾	3,346,671	5.1 %
Named Executive Officers and Directors:		
Claire Mazumdar, Ph.D. ⁽⁷⁾	1,517,017	2.3 %
Ryan Cohlhepp, Pharm.D. ⁽⁸⁾	821,940	1.2 %
David Raben, M.D. ⁽⁹⁾	305,489	*
Christopher Bowden, M.D. ⁽¹⁰⁾	49,779	*
Kate Haviland ⁽¹¹⁾	84,681	*
Nils Lonberg, Ph.D. ⁽¹²⁾	99,540	*
Kiran Mazumdar-Shaw ⁽¹³⁾	6,353,680	9.7 %
Carolyn Ng, Ph.D.	—	*
Jake Simson, Ph.D. ⁽¹⁴⁾	47,492	*
Michael Powell, Ph.D. ⁽¹⁵⁾	49,779	*
Scott Robertson ⁽¹⁶⁾	84,682	*
All executive officers and directors as a group (13 persons)⁽¹⁷⁾	9,492,554	13.8 %

* Represents beneficial ownership of less than one percent.

- (1) Information herein is based on a Schedule 13D filed with the SEC on March 2, 2026 by RA Capital Management, L.P., or RA Capital, Peter Kolchinsky, Rajeev Shah and RA Capital Healthcare Fund, L.P., or the Fund. RA Capital, Dr. Kolchinsky, Mr. Shah and the Fund are collectively referred to herein as the "RA Reporting Persons." The RA Reporting Persons' beneficial ownership of our common stock consists of (i) 4,603,418 shares of common stock directly held by the Fund; (ii) 2,652,575 shares of common stock directly held by RA Capital Nexus Fund III, L.P., or the Nexus Fund III, and (iii) 47,492 shares of common stock subject to underlying options exercisable by Jake Simson, Ph.D., a member of our board of directors, for the benefit of RA Capital within 60 days of April 15, 2026. The Fund also holds Pre-Funded Warrants (as defined below) through which it has a right to acquire 2,200,000 shares of common stock. The Pre-Funded Warrants contain a provision, or the Beneficial Ownership Blocker, which precludes exercise of the warrants to the extent that, following exercise, the Fund, together with its affiliates and other attribution parties, would own more than 9.99% of the common stock outstanding. The RA Reporting Persons are currently prohibited from exercising the Pre-Funded Warrants. RA Capital Healthcare Fund GP, LLC is the general partner of the Fund, and RA Capital Nexus Fund III GP, LLC is the general partner of the Nexus Fund III. The general partner of RA Capital is RA Capital Management GP, LLC, of which Dr. Kolchinsky and Mr. Shah are the controlling persons. RA Capital serves as investment adviser for each of the Fund and the Nexus Fund III and may be deemed a beneficial owner of any securities of the Issuer held by the Fund or the Nexus Fund III. Each of the Fund and the Nexus Fund III has delegated to RA Capital the sole power to vote and the sole power to dispose of all securities held in its portfolio, including the shares of the Issuer's Common Stock reported herein. Because each of the Fund and the Nexus Fund III has divested itself of voting and investment power over the reported securities it holds and may not revoke that delegation on less than 61 days' notice, each of the Fund and the Nexus Fund III disclaims beneficial ownership of the securities it holds. As managers of RA Capital, Dr. Kolchinsky and Mr. Shah may be deemed beneficial owners, of any securities of the Issuer beneficially owned by RA Capital. RA Capital, Dr. Kolchinsky, and Mr. Shah disclaim beneficial ownership of the securities. The business address of each RA Reporting Person is 200 Berkeley Street, 18th Floor, Boston, MA 02116.
- (2) Information herein is based on a Schedule 13G filed with the SEC on April 8, 2026 by T. Rowe Price Investment Management, Inc., or T. Rowe. T. Rowe reported aggregate beneficial ownership of 6,605,780 shares of common stock. The address for T. Rowe is 1307 Point Street, Baltimore, MD 21231.
- (3) Information herein is based on a Form 4 filed with the SEC on September 16, 2024 by Biocon Ltd. Consists of (i) 4,443,122 shares of common stock held by Biocon Ltd, and (ii) 1,080,775 shares of common stock held by Biocon Pharma Inc. Kiran Mazumdar-Shaw, a member of our board of directors, is the managing member of Biocon Ltd and Biocon Pharma Inc. and may be deemed to have voting and dispositive power with respect to the shares held by Biocon Ltd and Biocon Pharma, and Ms. Mazumdar-Shaw may be deemed to beneficially own the shares held by Biocon Ltd. and Biocon Pharma. The address for Biocon Ltd is 20th KM, Hosur Road, Electronic City, Bangalore - 560100, and the address for Biocon Pharma is 485 State Hwy 1 South, Suite B 305, Iselin, NJ 08830.
- (4) Information herein is based on a Schedule 13G filed with the SEC on July 31, 2025 by Invus Public Equities, L.P., or Invus Public Equities, Invus Public Equities Advisors, LLC, or Invus PE Advisors, Invus Global Management, LLC, or Global Management, Siren, L.L.C., or Siren, Avicenna Life Sci Master Fund LP, or Avicenna Fund, Avicenna Life Sci Master GP LLC, or Avicenna GP, Ulys, L.L.C., or Ulys, and Raymond Debban, or collectively, the Invus Reporting Persons. Invus Public Equities directly holds 4,861,944 shares of common stock, and Avicenna Fund directly holds 355,025 shares of common stock. Invus PE Advisors, as the general partner of Invus Public Equities, controls Invus Public Equities and, accordingly, may be deemed to beneficially own the shares directly held by Invus Public Equities. Global Management, as the managing member of Invus PE Advisors, controls Invus PE Advisors and, accordingly, may be deemed to beneficially own the shares that Invus PE Advisors may be deemed to beneficially own. Siren, as the managing member of Global Management, controls Global Management and, accordingly, may be deemed to beneficially own the shares that Global Management may be deemed to beneficially own. Avicenna GP, as the general partner of Avicenna Fund, controls Avicenna Fund and, accordingly, may be deemed to beneficially own the shares directly held by Avicenna Fund. Ulys, as the managing member of Avicenna GP, controls Avicenna GP and, accordingly, may be deemed to beneficially own the shares that Avicenna GP may be deemed to beneficially own. Mr. Debbane, as the managing member of Siren and Ulys, controls Siren and Ulys and, accordingly, may be deemed to beneficially own the shares that Siren and Ulys may be deemed to beneficially own. The business address of each Invus Reporting Person is 750 Lexington Avenue, 30th Floor, New York, NY 10022.
- (5) Information herein is based on a Schedule 13G filed with the SEC on February 17, 2026 by Vestal Point Capital, LP, or Vestal Investment Manager, and Ryan Wilder, or together the Vestal Reporting Persons. Consists of 3,750,000 shares of common stock directly held by a certain fund and a managed account, or the Vestal Point Fund and Account. Vestal Point Capital, LP, or the Vestal Investment Manager, a Delaware limited partnership, is the investment adviser to the Vestal Point Fund and Account, with respect to the shares of common stock directly held by the Vestal Point Fund and Account. Mr. Wilder is the Chief Investment Officer and Managing Partner of the Vestal Investment Manager and the Managing Member of Vestal Point Capital, LLC, the general partner of the Vestal Investment Manager. The principal business address of the Vestal Reporting Persons is 632 Broadway, Suite 602, New York, NY 10012.
- (6) Information herein is based on a Schedule 13G filed with the SEC on February 5, 2026 by FMR LLC and Abigail P. Johnson, or the FMR Reporting Persons. Abigail P. Johnson is a Director, the Chairman and the Chief Executive Officer of FMR LLC. Members of the Johnson family, including Abigail P. Johnson, are the predominant owners, directly or through trusts, of Series B voting common shares of FMR LLC, representing 49% of the voting power of FMR LLC. The Johnson family group and all other Series B shareholders have entered into a shareholders' voting agreement under which all Series B voting common shares will be voted in accordance with the majority vote of Series B voting common shares. Accordingly, through their ownership of voting common shares and the execution of the shareholders' voting agreement, members of the Johnson family may be deemed, under the Investment Company Act of 1940, to form a controlling group with respect to FMR LLC. Each of FMR LLC and Ms. Johnson report sole dispositive power and aggregate beneficial ownership over 3,347,223 shares of common stock, with FMR LLC having sole voting power over 3,346,671 of these shares on common stock. The business address of FMR Reporting Persons is 245 Summer Street, Boston, Massachusetts 02210.
- (7) Consists of (i) 339,392 shares of common stock held by Dr. Mazumdar, and (ii) 1,177,625 shares of common stock subject to underlying options exercisable by Dr. Mazumdar within 60 days of April 15, 2026.
- (8) Consists of (i) 196,141 shares of common stock held by Dr. Cohlhepp, and (ii) 625,799 shares of common stock subject to underlying options exercisable by Dr. Cohlhepp within 60 days of April 15, 2026.
- (9) Consists of (i) 55,286 shares of common stock held by Dr. Raben, and (ii) 250,203 shares of common stock subject to underlying options exercisable by Dr. Raben within 60 days of April 15, 2026.
- (10) Consists of 49,779 shares of common stock subject to underlying options exercisable by Dr. Bowden within 60 days of April 15, 2026.
- (11) Consists of (i) 7,437 shares of common stock held by Ms. Haviland, and (ii) 77,244 shares of common stock subject to underlying options exercisable within 60 days of April 15, 2026.
- (12) Consists of (i) 29,988 shares of common stock held by Dr. Lonberg, and (ii) 69,552 shares of common stock subject to underlying options exercisable by Dr. Lonberg within 60 days of April 15, 2026.

- (13) See footnote (3) above. In addition, consists of (i) 324,552 shares of common stock held by Glentech International, a private company limited by shares of which Ms. Mazumdar-Shaw is the managing member, (ii) 432,736 shares of common stock held by Carica Investments, a partnership firm of which Ms. Mazumdar-Shaw is the managing partner, (iii) 16,669 shares of common stock held by Ms. Mazumdar-Shaw, and (iv) 55,826 shares of common stock subject to underlying options exercisable by Ms. Mazumdar-Shaw within 60 days of April 15, 2026.
- (14) Consists of 47,492 shares of common stock subject to underlying options exercisable by Dr. Simson within 60 days of April 15, 2026. Dr. Simson holds these options for the benefit of the Fund and Nexus Fund III. Dr. Simson is obligated to turn over to RA Capital any net cash or stock received upon exercise of these options and, therefore, Dr. Simson disclaims beneficial ownership of these options and underlying common stock.
- (15) Consists of 49,779 shares of common stock subject to underlying options exercisable by Dr. Powell within 60 days of April 15, 2026.
- (16) Consists of 84,682 shares of common stock subject to underlying options exercisable by Mr. Robertson within 60 days of April 15, 2026.
- (17) Includes (i) the shares of common stock described in footnotes (3) and (7) through (16) above, (ii) 145,335 shares of common stock held by Ivan Hyep, our Chief Financial Officer, and (iii) an aggregate of 544,333 shares of common stock underlying options exercisable by Mr. Hyep and Lara Meisner, our Chief Legal Officer, within 60 days of April 15, 2026.

REPORT OF THE AUDIT COMMITTEE

The audit committee is appointed by the board of directors to assist the board of directors in fulfilling its oversight responsibilities with respect to (1) the integrity of Bicara Therapeutics' financial statements and financial reporting process and systems of internal controls regarding finance, accounting, and compliance with legal and regulatory requirements, (2) the qualifications, independence, and performance of Bicara Therapeutics' independent registered public accounting firm, (3) the performance of Bicara Therapeutics' internal audit function, if any, and (4) other matters as set forth in the charter of the audit committee approved by the board of directors.

Management is responsible for the preparation of Bicara Therapeutics' financial statements and the financial reporting process, including its system of internal control over financial reporting and its disclosure controls and procedures. The independent registered public accounting firm is responsible for performing an audit of Bicara Therapeutics' financial statements in accordance with the standards of the Public Company Accounting Oversight Board (PCAOB) and issuing a report thereon. The audit committee's responsibility is to monitor and oversee these processes.

In connection with these responsibilities, the audit committee reviewed and discussed with management and the independent registered public accounting firm the audited consolidated financial statements of Bicara Therapeutics for the fiscal year ended December 31, 2025. The audit committee also discussed with the independent registered public accounting firm the matters required to be discussed by the PCAOB's Auditing Standard No. 1301, *Communication with Audit Committees*. In addition, the audit committee received written communications from the independent registered public accounting firm confirming their independence as required by the applicable requirements of the PCAOB and has discussed with the independent registered public accounting firm their independence.

Based on the reviews and discussions referred to above, the audit committee recommended to the board of directors that the audited consolidated financial statements of Bicara Therapeutics be included in Bicara Therapeutics' Annual Report on Form 10-K for the fiscal year ended December 31, 2025, that was filed with the SEC. The information contained in this report shall not be deemed to be (1) "soliciting material," (2) "filed" with the SEC, (3) subject to Regulations 14A or 14C of the Exchange Act, or (4) subject to the liabilities of Section 18 of the Exchange Act. This report shall not be deemed incorporated by reference into any of our other filings under the Exchange Act or the Securities Act, except to the extent that we specifically incorporate it by reference into such filing.

THE AUDIT COMMITTEE OF THE BOARD OF DIRECTORS OF BICARA THERAPEUTICS INC.

Scott Robertson, *Chairperson*

Carolyn Ng, Ph.D.

Michael Powell, Ph.D.

April 27, 2026

HOUSEHOLDING

Some banks, brokers and other nominee record holders may be participating in the practice of “householding” proxy statements and annual reports. This means that only one copy of our documents, including the annual report to stockholders and proxy statement, may have been sent to multiple stockholders in your household. We will promptly deliver a separate copy of either document to you upon written or oral request to Bicara Therapeutics Inc., 116 Huntington Avenue, Suite 703, Boston, MA 02116, Attention: Corporate Secretary, telephone: 617-468-4219. If you want to receive separate copies of the proxy statement or annual report to stockholders in the future, or if you are receiving multiple copies and would like to receive only one copy per household, you should contact your bank, broker or other nominee record holder, or you may contact us at the above address and phone number.

STOCKHOLDER PROPOSALS

A stockholder who would like to have a proposal considered for inclusion in our 2027 proxy statement must submit the proposal in accordance with the procedures outlined in Rule 14a-8 of the Exchange Act so that it is received by us no later than December 28, 2026, which is 120 days prior to April 27, 2027. However, if the date of the 2027 annual meeting of stockholders is changed by more than 30 days from the date of the previous year’s meeting, then the deadline is a reasonable time before we begin to print and send our proxy statement for the 2027 annual meeting of stockholders. SEC rules set standards for eligibility and specify the types of stockholder proposals that may be excluded from a proxy statement. Stockholder proposals should be addressed to Bicara Therapeutics Inc., 116 Huntington Avenue, Suite 703, Boston, MA 02116, Attention: Corporate Secretary. We also encourage you to submit any such proposals via email to IR@bicara.com.

If a stockholder wishes to propose a nomination of persons for election to our board of directors or present a proposal at an annual meeting but does not wish to have the proposal considered for inclusion in our proxy statement and proxy card, our bylaws establish an advance notice procedure for such nominations and proposals. Stockholders at an annual meeting may only consider proposals or nominations specified in the notice of meeting or brought before the meeting by or at the direction of the board of directors or by a stockholder of record on the record date for the meeting, who is entitled to vote at the meeting and who has delivered timely notice in proper form to our corporate secretary of the stockholder’s intention to bring such business before the meeting.

The required notice must be in writing and received by our corporate secretary at our principal executive offices not less than 90 days nor more than 120 days prior to the first anniversary of the preceding year’s annual meeting. However, in the event that the date of the annual meeting is advanced by more than 30 days, or delayed by more than 60 days, from the first anniversary of the preceding year’s annual meeting, a stockholder’s notice must be so received no earlier than the 120th day prior to such annual meeting and not later than the close of business on the later of (A) the 90th day prior to such annual meeting and (B) the tenth day following the day on which notice of the date of such annual meeting was mailed or public disclosure of the date of such annual meeting was made, whichever first occurs. For stockholder proposals to be brought before the 2027 annual meeting of stockholders, the required notice must be received by our corporate secretary at our principal executive offices no earlier than February 9, 2027 and no later than March 11, 2027. Stockholder proposals and the required notice should be addressed to Bicara Therapeutics Inc., 116 Huntington Avenue, Suite 703, Boston, MA 02116, Attention: Corporate Secretary. In addition, stockholders who intend to solicit proxies in support of director nominees other than the Company’s nominees must comply with the additional requirements of Rule 14a-19(b) under the Exchange Act.

OTHER MATTERS

Our board of directors does not know of any other matters to be brought before the Annual Meeting. If any other matters not mentioned in this proxy statement are properly brought before the meeting, the individuals named in the enclosed proxy intend to use their discretionary voting authority under the proxy to vote the proxy in accordance with their best judgment on those matters.

BICARA THERAPEUTICS INC.
116 HUNTINGTON AVENUE, SUITE 703
BOSTON, MA 02116



VOTE BY INTERNET
Before The Meeting - Go to www.proxyvote.com or scan the QR Barcode above
Use the Internet to transmit your voting instructions and for electronic delivery of information up until 11:59 p.m. Eastern Time on June 8, 2026. Have your proxy card in hand when you access the web site and follow the instructions to obtain your records and to create an electronic voting instruction form.

During The Meeting - Go to www.virtualshareholdermeeting.com/BCAX2026
You may attend the meeting via the Internet and vote during the meeting. Have the information that is printed in the box marked by the arrow available and follow the instructions.

VOTE BY PHONE - 1-800-690-6903
Use any touch-tone telephone to transmit your voting instructions up until 11:59 p.m. Eastern Time on June 8, 2026. Have your proxy card in hand when you call and then follow the instructions.

VOTE BY MAIL
Mark, sign and date your proxy card and return it in the postage-paid envelope we have provided or return it to Vote Processing, c/o Broadridge, 51 Mercedes Way, Edgewood, NY 11717.

TO VOTE, MARK BLOCKS BELOW IN BLUE OR BLACK INK AS FOLLOWS:

V92792-P51812

KEEP THIS PORTION FOR YOUR RECORDS
DETACH AND RETURN THIS PORTION ONLY

THIS PROXY CARD IS VALID ONLY WHEN SIGNED AND DATED.

BICARA THERAPEUTICS INC.

The Board of Directors recommends you vote FOR the following proposals:

1. To elect two class II directors to our board of directors, to serve until the 2029 annual meeting of stockholders and until his or her successor has been duly elected and qualified, or until his or her earlier death, resignation or removal.

Nominees:

For Withhold

1a. Christopher Bowden, M.D.

☐☐

1b. Carolyn Ng, Ph.D.

☐☐

For Against Abstain

2. To ratify the appointment of KPMG LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2026; and ☐ ☐ ☐

3. To transact any other business properly brought before the Annual Meeting or any adjournment or postponement of the Annual Meeting.

Please sign exactly as your name(s) appear(s) hereon. When signing as attorney, executor, administrator, or other fiduciary, please give full title as such. Joint owners should each sign personally. All holders must sign. If a corporation or partnership, please sign in full corporate or partnership name by authorized officer.

Signature [PLEASE SIGN WITHIN BOX] Date

Signature (Joint Owners) Date

**Important Notice Regarding the Availability of Proxy Materials for the Annual Meeting of Stockholders
to be Held on June 9, 2026:**

The Notice, Proxy Statement and 2025 Annual Report to Stockholders are available at www.proxyvote.com.

V92793-P51812

**BICARA THERAPEUTICS INC.
ANNUAL MEETING OF STOCKHOLDERS
JUNE 9, 2026 9:00 AM EASTERN TIME
THIS PROXY IS SOLICITED ON BEHALF OF THE BOARD OF DIRECTORS**

The stockholder(s) hereby appoint(s) Claire Mazumdar, Ph.D. and Ryan Cohlhepp, Pharm.D., or either of them, as proxies, each with the power to appoint his or her substitute, and hereby authorize(s) them to represent and to vote, as designated on the reverse side of this ballot, all of the shares of Common Stock of BICARA THERAPEUTICS INC. that the stockholder(s) is/are entitled to vote at the Annual Meeting of Stockholders to be held at 9:00 AM Eastern Time, on June 9, 2026, virtually at www.virtualshareholdermeeting.com/BCAX2026, and any adjournment or postponement thereof.

This proxy, when properly executed, will be voted in the manner directed herein. If no such direction is made, this proxy will be voted in accordance with the Board of Directors' recommendations.

Continued and to be signed on reverse side